The American School Board Journal

A Periodical of School Administration

June 1961

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OUR COVER

An exterior view of the Edward S. Ingraham Senior High School, Seattle, Wash., is shown on our cover. For details see page 18.

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the school scene

■ The Queensboro (N. Y.) Teachers Assn. charged that about **$4 million in manhours is wasted annually by city teachers and supervisors** in processing books and supplies after a survey of 131 Queens schools. The association suggested that a plan be developed to free teachers and supervisors of these routine chores so that the extra time may be spent working with teachers and children.

■ **American schools and colleges achieved a significant gain in their fight against major fires in 1960,** according to a report by the National Fire Protection Assn. Large loss fires over $250,000 dropped in both number and losses. Cost of all large loss fires in the United States and Canada during 1960 was $356,500,000 of which the U.S. share was $324,898,500.

■ The Justice Department in Washington has asked the federal courts to **force the reopening of public schools in Prince Edward County, Va.** The county closed its public school system two years ago to avoid desegregation. Since then the white children have attended private schools, and the Negro children have had no schools. The federal court was asked to bar the state of Virginia and state officials from using any state funds for public schools anywhere in Virginia, and to prohibit the use of any such funds in the private school system.

■ Unanimous approval of the report of its Educational Advisory Committee, **calling for national co-ordination of the efforts of voluntary groups organized to resist totalitarianism in the battle of men's minds,** was expressed April 12 by more than 500 leaders of education, industry, armed forces, and government in conference in Chicago.

The conference was the seventh of a series annually managed by the Institute for American Strategy, 140 S. Dearborn St., Chicago, as a means of strengthening the position of the United States in the cold war. Speakers at the conference included Admiral Arleigh Burke, Dr. William Y. Elliott of Harvard, Dr. Glenn Campbell of Hoover Institute at Stanford, William Sullivan of the F.B.I., and Congressman Walter Judd.

■ **An intensive program to improve the quality of education** will be undertaken co-operatively by four universities in upstate New York. The two-part program, to be a permanent one, will be supported during the six-year initial period by a grant of $1,844,200 from the Ford Foundation.

One section will involve the universities in demonstration programs designed to move able students into teaching through independent study and blocked studies in education in lieu of formal education courses. The other project will set up and operate a pattern for the preparation of school administrators to provide them with skills to better meet administrative responsibilities.

In the second project, the universities will select 24 doctoral students in educational administration each year for assignment to one-year internships in selected school systems. The administrative interns must have had a strong liberal education, concentration in teaching subject, and be of high scholastic ability with good potential for educational leadership.

■ **During the month of February, 1961, school bonds were sold in the amount of $160,369,649.** The largest sales were in California, $16,993,149; Illinois, $9,956,500; Maryland, $7,600,000; New York, $24,189,000; Texas, $19,948,000; Wisconsin, $14,973,000. The average yield of 20 outstanding municipal bonds at the end of March was 3.51 per cent.

For your index . . . An index to Volume 142, January to June, 1961, has been prepared. For a free copy, address a post card to Bruce-Milwaukee, P. O. 2068, Milwaukee 1, Wis., asking for index 142.

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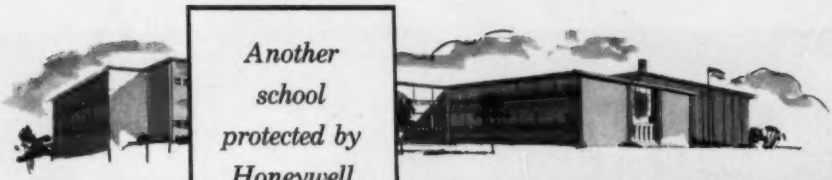

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NSBA Report

The NSBA in Philadelphia

The 21st annual convention of the National School Boards Association, held May 4 to 6 at Philadelphia's Trade and Convention Center for general sessions and the meeting rooms of the city's Sheraton Hotel for "special interest" clinics, demonstrated how "School Boards Face National Issues."

Some 2500 board members assembled to hear discussions about a variety of major issues confronting today's schools. The emphasis of the program and the subject of much of the "lobby" and "across-the-table" argumentation — which contributes greatly to the value of each NSBA convention — centered around the subject of financing schools in the years ahead. And the spotlight on school financing was on the role of the Federal Government. In fact, while the program featured several proponents of federal aid, the delegate assembly — after years of shelving such resolutions — voted overwhelmingly to oppose federal aid to education.

Financing Schools

On this topic, the conventioners heard:

1. Dr. Walter A. Anderson, dean, school of education, New York University, on "Financing Public Education in the Sixties," comment that: "All possible sources of increased financial aid must be tapped to meet the rising costs of education for increased enrollments and to improve instruction. . . . In my judgment in many communities property taxes can be raised somewhat although this source is fast approaching the critical state and can no longer be relied upon for the lion's share of increased financial support. Special taxes of various kinds and state and federal income taxes seem to be much more promising sources."

2. Dr. Orlando F. Furno, director of research, Baltimore City, Md., Schools, on "What Should Quality Education Cost?" stated that "The changing demands of society upon education require that the Federal Government emphasize a new approach toward support of education. The emerging philosophy embodies as its core general support of quality education instead of special aids for this or that particular purpose. Factors in our national economy have thrust this role upon our Federal Government. Whether we like it or not matters little. But how the people want the Federal Government to react to this challenge matters a lot. What we prize for our schools cannot be achieved without money. . . ."

Education for Americans

The keynoter of the convention, Rep. Walter H. Judd of Minnesota, a recognized authority on foreign affairs, indicated how the schools should promote America in our "cold-war" age: (1) teach children more about other peoples, what they think, and why they act the way they do; (2) teach children more about other governmental systems; (3) teach children more about ourselves, about our own growth and development; (4) teach children to evaluate, criticize, examine.

Representative Judd attacked this country's "person-to-person" exchange program with the charge that America sends "innocents abroad" while Russia sends "trained agents" to this country. (Listening to these remarks were a group of five Soviet educators in Philadelphia on a three-week tour of U. S. educational institutions.)

President's Message

Roy O. Frantz of Pueblo, Colo., NSBA president, defined for school boards "three big problems we have to solve: learning to communicate with each other, evaluating our program of education, and developing a sense of urgency."

President Frantz warned boards to "avoid the educational bandwagons that regularly come down the road. We will learn to recognize the vested interest of a person or an organization for what it is and subordinate it to the overall purpose of education." He urged the ridding of American education's "excess baggage" and agreement on curricular priorities. "I am not advocating that we throw out everything but the three R's. Far from it. But it is important for a school board to examine the curriculum regularly — and perhaps even extracurricular activities — to see if there isn't excess baggage for which the community is paying."

Finally, on the problem of gearing national needs and local control of schools, he said that "there are undeniable national issues and there are also local needs. . . . The two can be reconciled and serve each other. . . . In that reconciliation, our schools will be strengthened and, as a result, the education of each child will be improved."

Other National Issues

Of interest to boardmen attending the convention were clinics devoted (1) to school law — married high school students, inspection of school records, and recent church-state decisions as they relate to public schools; (2) to teacher tenure and teachers in politics; (3) curriculum in small schools; (4) how to evaluate quality education; (5) school plant economy; etc.

Miscellaneous

An added feature of this year's NSBA convention was an architectural exhibit of various types of schools designed by various architectural firms. The exhibits, which displayed the usual showcase of new products and equipment for the schools, were well received by the convening board members — attesting to their growing interest in new tools for teaching.

NSBA officers for 1961–62 include Theodore C. Sargent, Swampscott, Mass., president; Cyrus M. Higley, Norwich, N. Y., first vice-president; Mrs. Helen Radke, Port Angeles, Wash., second vice-president; Mrs. Edna Paul, St. Paul, Minn., treasurer.

In addition to the federal aid resolution, a center of interest was the issue of whether the NSBA should become an action as well as a service association. This possible alteration in policy of expanding its role as information-provider to include the function of a program of action on the nation's educational issues is slated for further airing during the coming months and developments will be reported in future NSBA reports. — *E. J. P.* ■

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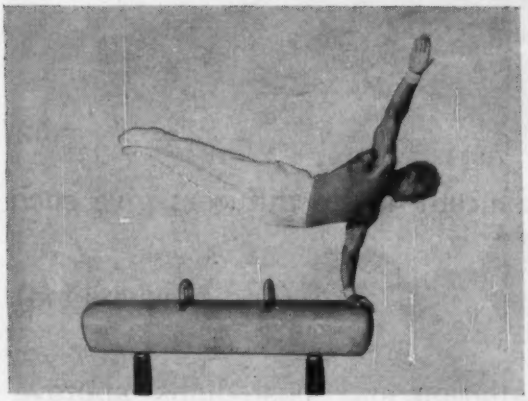

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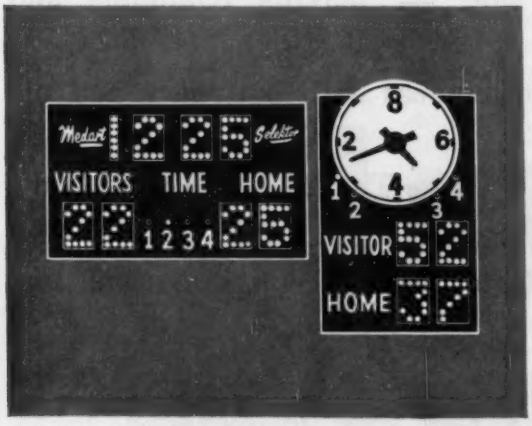

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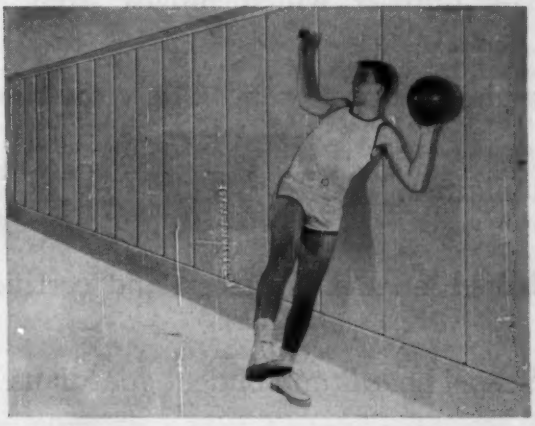

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June 1961

Curriculum Guide for School Board Members

JOHN P. SULLIVAN

Many school board members might proceed along far different channels in choosing subjects to be taught in their school systems if they had a working criteria to guide them in their selections.

Mr. Sullivan is a professor of education at Stonehill College in North Easton, Mass.

In late 1960 a small eastern city school board dropped driver education from its formal high school offerings. The reason: too costly. This affluent community had started the program six years before. The reason: to save extra insurance charges on its youthful drivers. Fair minded citizens will concede these are not the most valid arguments for either adding or dropping a school subject. And driver education is but one modern curriculum issue to challenge our school leaders.

The city board members probably would have proceeded along far different channels had there been available some simple yardstick to evaluate the initial proposal.* Surely their deliberations would have been even more meaningful had they before them a working criteria for selecting a school subject. But this kind of guidance does not appear readily available. The Education Index lists many references to articles about the school curriculum; but it contains little information which would provide insights into a realistic evaluation of subject selection. To this latter matter, then, shall critical reflection be directed. The primary objective will be to assist the busy school board member by constructing a set of criteria to evaluate curriculum content.

Curriculum content, for purposes of this discussion, refers to any organized sequence of basic academic and cultural subjects as well as laboratory sciences associated with elementary and secondary grades. Specifically these would be the separate disciplines as reading, writing, arithmetic, geography, history, civics, art,

* A committee of American Association of School Administrators, in a 1946 report — School Boards in Action — said that the school board had general responsibility for the school curriculum.

music, English (formal grammar, composition, literature), mathematics, physics, laboratory sciences, languages. Underlying this listing are two pedagogical directives. The "subject" is either a necessary tool for learning other subjects or it is absolutely essential as background preparation for further study in that field. At the secondary level these subjects would be the ones commonly offered to qualify students for graduation or for entrance to college.

No one would rightly object to keeping the school program updated, but change alone is certainly to be challenged as the sole argument for any proposed additions. Even as new knowledge pushes old knowledge harder to demand its place in an already crowded curriculum, it becomes increasingly urgent that authorities challenge all novel educational proposals. For it is not mere chance that the American school board still stands as the legal guardian against unnecessary invasions of the regularly established school program.

Critical reflection on the value of any school subject (old or new) raises many questions. So the question format will be used in setting up a working guide for approving or rejecting a school subject. Discussion of education matters, as with other areas, faces this limitation: more questions than answers show up. The aim, therefore, will be to raise only those curriculum questions to which school board members can supply answers.

One qualifying note is appended. This list is submitted as neither final nor definitive; it is proposed simply as a working guide. Hardly any writer would regard himself as a decision-making surrogate for the American school board. These suggested questions are offered to indicate the kinds of traits that school board members might check in considering whether to select or reject a school subject. Queries concerned with evaluation fall into four divisions: general requirements for the subject, its purpose, its value to student and to society, and administrative problems.

Each question in this series should be checked either "yes" or "no," never maybe. A few items may admit of ready replies. Most, however, will demand some reflective thought prior to the decision answer. A simple yardstick is suggested whereby results of the completed check list may have meaning. More than two-thirds of all questions should be answered "yes" to consider including the evaluated subject in the academic content of the formal school curriculum.

In this presentation the thinking is oriented toward those subjects which obtain in schools identified not as social but as academic institutions. And in these institutions academic subjects are found in each of the multi-track offerings — technical, trade training, general business, as well as college preparatory courses. The aim of the question list is to determine whether any new curriculum offering would tend to diminish the time allotments or decrease the emphasis of current academic requirements. As advocates of basic education school administrators want to make sure that the able students are not held back by the less able. They also want to be assured that the average and below-average students are not short-changed when it comes to the solid academic subjects. In other words, they believe that all students have "academic potential" and that to serve all American youth means to bring the value of academic subject matter to everyone. ■

Criteria for Evaluating a Subject in the School Curriculum

(*Answer these questions yes or no and then total up the number of each.*)

A. TO DETERMINE WHETHER "SUBJECT" SATISFIES SCHOOL REQUIREMENTS:

1. Can this subject be incorporated into the present curriculum without curtailing essential subjects?
2. Is this subject one that a nonschool agency could not take over?
3. Is this subject one that could not be organized as an extracurricular activity after regular school hours?
4. Is this subject more than a mere desirable innovation?
5. Is this subject sponsored by "pressure groups" for ulterior motives?
6. Does this subject have its own structure, its own body of intelligible content, its own history?

B. TO DETERMINE WHETHER "SUBJECT" FULFILLS EDUCATIONAL PURPOSES:

7. Is the teaching of this subject a proper task for the school?
8. Does this subject make its own distinctive contribution to the over-all aims of education?
9. Is this subject intrinsically useful for the cultivation of intellectual knowledge, habits, attitudes, values?
10. Is it part of our cultural heritage?
11. Is it a necessary tool for learning other subjects?
12. Is this subject essential as background preparation for further study in that field?
13. Does this subject have something besides physical skills to recommend it?
14. Does this subject have something other than social amenities to recommend it?
15. Is this subject appropriate to age group, grade level, and maturation level of students?

C. TO DETERMINE THE VALUE OF "SUBJECT" TO STUDENT AND TO SOCIETY:

16. Will it contribute to harmonious development of student?
17. Will it sharpen the intellect and discipline the mind?
18. Will this subject help student to attain goals of life?
19. Will this subject be useful here and now?
20. Can this subject meet a future vocational need?
21. Can this subject help student meet the intellectual requirements for citizenship?
22. Does this subject serve the nation's welfare?
23. Does this subject promote the intellectual life of society?

D. TO DETERMINE WHETHER PERSONNEL, ORGANIZATION, AND FINANCIAL FACTORS PRESENT INSURMOUNTABLE PROBLEMS FOR THE SCHOOL BOARD:

24. Are there teachers of excellence, soundly trained, and readily available to teach this subject?
25. Does school have adequate facilities, proper equipment, and the educational materials required for teaching this subject to all interested and qualified students?

The current trend toward four ungraded areas of learning in an educational program which promises to better accommodate individual differences is discussed in this article on articulation.

New Problems In Articulation

RICHARD W. ELLIOTT

Mr. Elliott is with the Training School of Westfield State College, Westfield, Mass.

FOR years the 6-2-4, 6-3-3, and 8-4, in educational planning discussions has sounded like the old numbers game — or football signals. The problem was not so much in the numbers as in the hyphens. Many an effective arithmetic or reading or language program has failed to hurdle the hyphen.

The problem of co-ordination or articulation has long been with school officials. Usually, each organizational block was housed in one building. Articulation involved not only two buildings, but two approaches and two periods in child growth.

A new need for adjustment now looms on the horizon. Recently, the trend is evident to four blocks of learning: primary, intermediate, junior high, and senior high. This is probably the result of the movement toward the nongraded elementary school, which in turn is an attempt to accommodate individual differences based on what is known about child growth and development. In a growing percentage of the nation's urban areas, grade designations are being eliminated in the primaries. There is no grade classification such as 1, 2, 3.

One of the questions encountered with the nongraded primary program is, "What do we do at fourth grade — or is it now *first* grade?" The answer in some cases has been to extend this nongraded approach upward through the conventional sixth grade level to involve the entire elementary school in a nongraded program. The definite break or obvious adjustment period is at the end of the primary "unit" and before the fourth grade. Some systems have modified their grades 4, 5, and 6 with the introduction of continuous progress reading plans and flexible grouping which cuts across grade lines for purposes of instruction. Others have simply maintained or continued the stiff grade structure above primary level.

The term *intermediate* which had until recently been reserved for that school period between elementary and senior high school is rapidly coming to mean the conventional grades 4, 5, and 6. There are relatively few schools in the nation housing grades 7, 8, and/or 9 and still called *intermediate*. New school construction has presented the opportunity to rename the building: Junior High School.

Soon, it seems, that the high school will offer not only several courses or "tracks," but will be nongraded. Following the lead of the primary area, all the traditional grades from 1 through 12 may be abandoned. In their place, there will be four areas of instruction, each embracing a three year block. Within these areas, the facile learners will have room to maneuver and the slower pupils will have opportunity to achieve at their best rate.

Although causing incidental problems, this trend toward four large ungraded areas of learning may offer solutions to many long-time ills in the educational program. Such organization promises to better accommodate individual differences — a goal long sought. Interscholastic athletic activities which have been infringing on the educational worth of school programs may be eliminated. Physical education may come to mean physical education for all. Waste time caused by unnecessary grade repetition and the evils of nonpromotion may be eradicated. The entire result will probably be a much healthier learning situation. The true community school, planned to house ungraded learning areas, may come into existence. And with this, a closer relation between parent and school personnel. Building plans and costs will be affected, probably for the better.

It seems that an organization, at last, is evolving with an eye on the child and not on the organization. ■

A Look at Salary Schedule Length

A school board member reviews the present length of service salary schedules in the teaching profession and compares them with the average annual salaries of employees in other occupations.

JOHN A. PERKINS

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As every school committee member knows the typical teachers' salary schedule in the public school system is constructed on the basis that a teacher holding a particular degree will advance through the steps applicable to his or her degree status according to his or her years of experience. Typically, the advance from step to step is automatic subject only to an increment being denied in cases of unsatisfactory service. When a teacher has reached the top step on his schedule, further advancement in pay is possible only through achieving a higher degree status or finding an opportunity in school administration. There are still relatively few cities and towns which have been bold enough to break away from this type of salary structure.

But school boards will have to break with this tradition or inevitably the quality of public school education will suffer. They are trying to recruit and hold teachers with a tool which will not do the job. The rigid length of service salary schedules do not give school departments the means to compete effectively for individuals of superior talent.

Consider a few simple facts. In September, 1960, under most of the salary schedules which are in effect in the greater Boston area, the minimum starting pay for a man with a bachelor's degree would fall within a $4,000 to $4,500 range. By way of comparison, according to the Fifteenth Annual Endicott Report published in the February 1961 *Journal of College Placement*, the *average* starting salary for men graduating from college in 1960 and entering engineering was $6,120; accounting, $5,352; sales, $5,280; and general business activities, $5,136.

Similarly, under most salary schedules in the greater Boston area, a teacher with a bachelor's degree entering his sixth year of teaching in September 1960 received $5,000 to $5,650. According to the Endicott report, the *average* salary of a man five years out of college (Class of 1955) runs from $7,440 in general business to $8,184 in engineering.

Under most salary schedules in the greater Boston area a teacher with a bachelor's degree starting his eleventh year of teaching in September 1960 would receive $6,000 to $6,900. Under the Endicott report the *average* salary of men in industry ten years out of college (Class of 1950) runs from $9,588 in general business to $10,188 in engineering.

Perhaps even more significant than starting salary five or ten years out of college is the salary which the college graduate may reasonably expect to attain at the peak of his career. Under the typical rigid length of service salary schedules in effect in public school systems a teacher, after a designated number of years, reaches the top step on the schedule. Most salary schedules in effect September, 1960, in the greater Boston area had from ten to fifteen steps applicable to the bachelor's degree and reached a maximum for male teachers of somewhere between $6,000 and $7,500. In this area, as across the country, a few towns have attempted to provide a higher attainable maximum for which eligibility is established by some type of evaluation. However, it would be a rare community indeed where a male teacher with a bachelor's degree would receive in September 1960 a salary above $7,500 or in which a male teacher with a master's degree would receive a salary above $8,000.

Some indication of the financial opportunities open to the same pool of college talent to which our school systems must look for at least some of our teachers can be obtained from the U.S. Department of Labor National Survey of Professional, Administrative,

Technical, and Clerical Pay as to rates in effect in the winter 1959–60. A table prepared from the survey is included in this article. It divides each line of work into different levels according to the nature of the work and responsibility of the job. The *average* annual salaries in the top level of the different categories of employed personnel in selected professional and administrative occupations are as follows: accountants, $12,031; auditors, $9,307; attorneys, $23,020; chemists, $13,696; engineers, $14,193; mathematicians, $15,054; job analysts, $9,354; employment managers, $11,680; directors of personnel, $15,747; managers of office services, $11,356. The top level in all cases involves supervision of personnel of equivalent training. Clearly then, the teaching field is not offering a long-term financial opportunity comparable to that offered in other fields of employment.

The figures point out what school board members already know. The problem which must be solved has been changing, but only a few scattered communities have really attempted a radical adjustment of salary policy to fit the new conditions.

What has happened? There is a greatly increased demand in industry for those with a bachelor's or more advanced degree. Partly this results from the demand for persons to fill scientific and technical positions. Partly it results from an attitude that pervades American business more and more, an attitude that holds the college degree as evidence of trainable capacity. As industry and the professions attempt to lure into their fields larger numbers of academically talented young people, education's need for the talents of these same people is increasing. The percentage of students dropping out before completing high school is declining and the need for teachers correspondingly increasing. A revolution has been taking place in mathematics and science teaching as well as in foreign language teaching below the college level. Higher qualifications are required in the teacher for some of the programs offered today, especially in junior and senior school. In short, from all directions the demand for the services of academically talented people has increased. Their talents have become expensive to hire. If school systems are going to succeed in enlisting the share of this pool of talent which is needed in our schools, they shall have to compete more effectively. They cannot expect the dedication to service which so many teachers exemplify to do the whole job for them.

What must be done? Some say the answer is simply to raise salary schedules, but this will never solve the problem.

The Endicott report states that engineering graduates ten years out of college are receiving on the average $10,188 per year. Does this mean that a town which in September, 1960, offered a top of $6,500 for a bachelor's degree should establish a new schedule which gives the top salary a boost of $3,500? Obviously, it does not. First of all, there are many satisfactory teachers who can be hired and held in our school systems without being paid any such figure for ten years of experience. In the second place, if the teaching salary schedule were raised so that the top salary for a bachelor's degree was fixed at, say $10,000, the schools would still only be meeting the *average* salary in industry and would probably be excluding the possibility of drawing those (aside from a few individuals with special dedication) who are tops in scientific and technical fields.

Simply raising salary schedules to compete for the individuals schools must recruit would be a colossal waste of money. This could mean an increase of 50 per cent or more in a typical town's salary budget, and it would still not be effective.

To solve the problem in a financially sensible manner, schools must reorganize their salary schedules. First, a means must be found which will permit school systems to pay more to better teachers than to others of the same degree status and to advance these faster than others. Second, a means must be found to pay superior teachers substantially more than the maximum limits applicable to others. These requirements will never be realized unless the lid on length of service salaries is held within reasonable limits, i.e., down to the values fixed in the market place for the kinds of talent which do not qualify for special compensation.

What does this mean in concrete terms? If in September, 1960, $4,250 was an appropriate first step on the bachelor's degree schedule, a school system should be free in an appropriate case where the talent is needed and competition requires it — to pay a substantially higher starting rate to a particular teacher. If the normal step increment on the established length of service schedule is $250, the system should be free in an appropriate case to give an extra increment, perhaps at the end of the third, sixth, tenth, and fifteenth years, or on one or more of those occasions, of, say from $500 to $1,500. If in September, 1960, $7,250 was an appropriate maximum on a length of service basis, an attempt should be made to hold the line on automatic length of service increments at that level and at the same time initiate new policies which would leave school systems free to pay superior teachers more. Probably we must think in terms of being able to advance a few key teachers in appropriate circumstances to a substantially higher level. At least one independent secondary school has seen fit to establish salary ranges permitting some teachers to receive as much as $12,000.

Just how far competition from other lines of work may force public school systems to go by way of salary inducement to attract and hold teachers is unknown. A school system can establish the principle of flexible salaries and provide for substantial compensation above the standard schedule, then let its own experience determine the limits to which it may have to go in order to accomplish its objectives. It is essential to recognize the facts and start to move, and the time to move is now.

This will sound suspiciously like merit pay to those whose ears have heard the salary controversies of the past decade. And, of course, it is. But

Average Annual Salaries of Employed Personnel in Selected Professional and Administrative Occupations

JANUARY — JUNE 1960

(Adapted from U. S. Department of Labor, National Survey of Professional, Administrative, Technical and Clerical Pay, Bulletin No. 1289)

Level	*Accountants*	*Auditors*	*Attorneys*	*Chemists*	*Engineers*	*Mathematicians*	*Job Analysts*	*Employment Managers*	*Directors of Personnel*	*Managers of Office Services*
I	$5,845	$4,980	$5,978	$5,529	$6,371	$5,786	$5,946	$6,668	$7,921	$7,251
II	6,903	6,062	7,299	6,447	7,241	6,760	6,690	7,841	9,484	8,042
III	*8,302	*7,648	9,980	7,763	8,411	7,992	7,388	9,110	13,141	9,399
IV	9,858	9,307	13,297	*9,496	*9,868	9,115	*9,354	11,680	15,747	11,356
V	12,031		*20,173	10,993	11,620	*11,788				
VI			23,020	13,696	14,193	14,193				
VII						15,054				

NOTE: Data on supervisors of various office machine operations omitted in above table.
*** First level at which supervision of personnel of equivalent training may be involved.**

the problem has assumed a new shape. The issue of merit pay as such has been argued largely in terms of providing an equitable reward for superior service or in terms of providing financial incentives for self-improvement and superior performance. Now conditions will no longer permit the issue to be resolved merely in these terms. The means to salary flexibility must be found, or schools will be staffed from the bottom rungs of the talent ladder.

Under these conditions, if the objectives are clear and the chosen means are well adapted to accomplish what needs to be done, the traditional arguments against merit pay lose much of their force. The basic objection probably has been the contention that there is no objective measurement of merit. The first thing to recognize, however, is that essentially the problem is not merit but the cost in the market place of certain needed talents and training. A man with the intellectual and educational qualifications to be a good physics or chemistry teacher in the high school commands a certain price. To attract and hold such an individual involves paying a competitive starting salary with an opportunity for advances in salary which is also competitive. Certainly his performance as a teacher should be considered; the problem of evaluation cannot be escaped. But basically the idea is to place a price on his talents which is commensurate, taking all things into account, with the opportunities open to him at the other places of employment in education or industry which compete for his services. The same thing is true of prospective foreign language, English, or mathematics teachers.

Another major argument against merit pay has been that a public school system is not like a business concern. A business concern can hire whomever it wishes and advance them at whatever rate and for whatever reasons it wishes. A school committee — on the other hand is an elected committee, exercising powers conferred by law, and accountable to the public for the fair and impartial exercise of those powers. All this is essentially true. But it is certainly not fair to pay no more to the teacher who is doing a superlative job in a difficult area than to the teacher who is doing a little more than performing barely satisfactory service. Nor do the school committees serve the public well when they adhere to a rigid salary schedule which requires paying inferior teachers more than their talents or performance deserve.

This does not mean, however, that there are no problems in the administration of a flexible salary program under a publicly elected committee. The salary policy should contain safeguards so that political pressure on the elected committee cannot become a method for any particular individual to obtain supplementary compensation. It may even be desirable to provide in written policies and procedures that steps for an award of supplementary compensation shall not be initiated by the school committee or any member of it and that the committee shall not award supplementary compensation in any case against the recommendation developed through established administrative procedures. The integrity of supplementary compensation requires that consideration of awards in particular cases must not be permitted to become a political matter. But this is a problem which exists on many issues of administration, and a program of flexible supplementary compensation is not unique in requiring that school committee members exercise self-restraint in problems which are matters of administration and not of policy.

The toughest question is not where to go but how to start. One basic problem is the establishment of criteria and the procedures by which they are to be applied. This paper, however, will not consider that difficult subject. Rather the following problem might be referred to as the problem of "going it alone."

It is very tempting to think that a school committee, having achieved a satisfactory length of service salary schedule, can simply freeze the schedule as is and then supplement it with a program which permits increased starting pay, increased increments, and increased maxima in appropriate instances. The principal difficulty is that neighboring cities and towns will not necessarily follow suit. As soon as a town holding to a traditional type salary schedule raises its maximum a notch or two, the effect will be to place senior teachers in that town automatically or practically automatically at a higher rate than some of the senior teachers in neighboring towns who have not qualified for supplementary compensation. And the neighboring school boards will be faced with the cry of discrimination.

It would certainly make things a lot easier if several towns could take the step together in clamping the lid on length of service increments. But this may not be possible, and it may be advisable, if necessary, to go it alone at the start. Someone has to lead the way. Conditions and local pressures will compel others to follow sooner or later.

In going it alone, a school committee must be sure that its program of supplementary compensation is big enough. Even if all the towns in an area move together, it is important that supplementary compensation should be large enough. If it is not large enough, it will accomplish nothing. It will present all the problems of flexibility and provide none of the benefits. But where the towns in an area do not act together, it is doubly essential that a town which does act provide an adequate program of supplementary compensation. For such a town, while holding a firm ceiling on ordinary length of service increments, must still compete with other towns which are holding a lighter rein on the maxima available on a length of service basis.

A flexible salary program with adequate supplementary compensation will speak in different ways to the different individuals concerned. To the new applicant with no experience it says: If you feel you have the ability and the determination to excel, you have an opportunity in our school system to rise to a salary above that open to you in other school systems. If you do not have this confidence in yourself, you will not do as well here in the long run as you will in a town with a rigid salary schedule, but if you are only interested in teaching for a few years, our basic schedule is comparable to that in other towns, and you will do as well here as elsewhere. To the teacher performing with average competence who has been in the system for several years, such a salary program says: When you have reached the top step on our regular salary schedule, you will receive further advances only in accordance with our established criteria. If you do not qualify under these criteria, that does not mean that we will no longer be interested in your services. We will be, and we believe that under our regular salary schedule you will be compensated at as high a rate as you would be able to obtain on the basis of your training, experience, and qualifications if you sought to transfer to another school system or other employment. To the barely satisfactory teacher such a salary program gives very little encouragement. It would probably be a desirable result if the effect were to induce such teachers to transfer to some other system, but, alas, they probably could not do so if they wished. and they will probably remain.

This is just what a salary program should say to teachers and prospective teachers. Over the years ahead maybe even the painful process of going it alone would have its useful effects.

One thing is clear. Whether alone or together, school committees must make the move. For at a time when improvement in the quality of education is a matter of national necessity, they cannot afford to continue a policy which over the years ahead will inevitably result in downgrading the quality of public school education. ■

For three years this school district has been able to expand its regular instructional program, ever since it decided to . . .

Try Saturday Classes For Enrichment

FRANK O. FENLEY

Mr. Fenley is superintendent of the Cupertino Union School District in California.

The Cupertino, Calif., Elementary School District, working in co-operation with the local Parent-Teacher Association, is finding that its regular instructional program can be enriched by means of special interest classes on Saturday mornings. Now in its third year, the program enrolls over 300 pupils in grades four through eight who take one or more of these eight subjects: arts and crafts, arithmetic, instrumental music, newswriting, public speaking, science, Spanish, and typewriting.

The idea of Saturday classes was first explored in the fall of 1958 at the suggestion of several parents. By means of a questionnaire, the parents of elementary school children were asked to indicate whether their children would attend Saturday classes; and, if so, what subjects they would probably want to take.

Responses revealed that many parents favored Saturday classes. They also showed that the number of pupils who would attend such classes was sufficient for practical operation. Finally, responses showed that parents would particularly like to have offered classes in arithmetic, arts and crafts, instrumental music, science, Spanish and typewriting.

It was decided to initiate Saturday morning classes in the subjects mentioned for a ten-week period. Enrollment was restricted to pupils in grades four through eight. Teachers were recruited from among the district's regular staff and were paid $5 per hour. In order to make the program self-supporting, a fee of 50 cents for each one-hour session, or $5 for the ten weeks was charged.

With the Cupertino Council of Parent-Teacher Associations acting as sponsor, the program was set up under the State's Civic Center Act. This act permits the use of public school buildings during nonschool hours by organizations that operate educational and other related activities. Having the council serve as a partner has proved to be particularly valuable in that it facilitates joint planning with parents. Furthermore, there is some doubt whether the program could be operated legally except as a civic center activity since the California school code does not specifically authorize school districts to conduct Saturday classes.

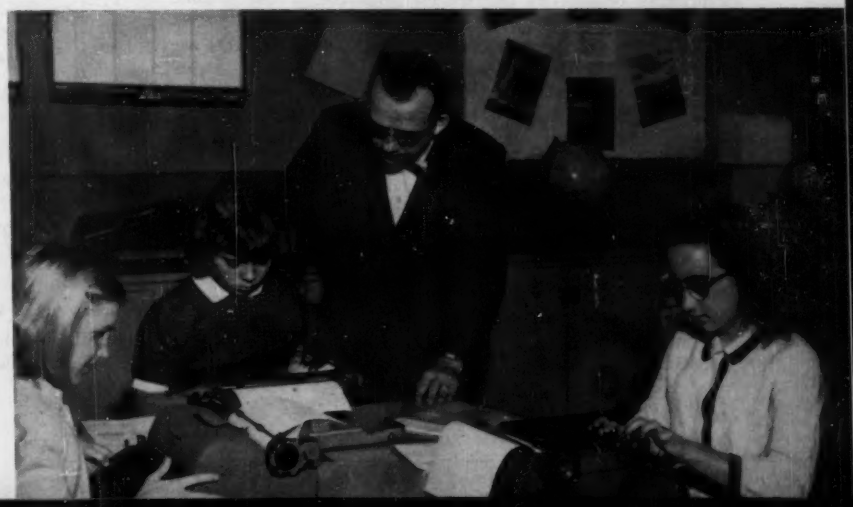
Enrollment in the first ten-week session was sufficient to make the program self-supporting and otherwise practicable. Also, at the end of the session, both parents and pupils showed general satisfaction with the program and contributed numerous suggestions for expanding it. This prompted school officials to continue the classes as a regular feature of the district's educational program.

In 1960 the program was expanded. Enrollment rose to 302 and includes some pupils from each of the district's 26 schools. The most popular course was typewriting with an enrollment of 77. Next in popularity was Spanish with an enrollment of 53.

Evaluation of the program to date is favorable as shown by pupil interest, good attendance, the reactions of parents, and the fact that the program makes it possible to provide desirable instruction which it is not feasible to include in the regular program. It also helps to meet the school district's responsibility for providing a comprehensive program of worth-while learning opportunities for the community's children. ■

Learning to use the slide rule (right) enriches the study of arithmetic.

Typing instructions (below) are the most popular, especially with the girls.



Fifty Often Overlooked Areas of Teacher Frustration

NEWTON S. METFESSEL and JOHN T. SHEA

This report states some of the reasons why teachers are leaving the profession at a time when schools are in need of qualified personnel.

Dr. Metfessel (left) is associate professor of educational psychology at the University of Southern California. Mr. Shea is superintendent of the Coachella Valley (Calif.) Joint Union High School District.

Each spring in the public schools of the nation, educators are deserting their profession at a time when the nation is facing its greatest need for qualified teachers. This tremendous waste of trained personnel has received considerable attention in terms of salary and overcrowded classrooms. The fact that teachers may have intense dissatisfactions not directly related to either of these variables has elicited comparatively little concern.

The survey here reported was developed in an attempt to isolate some of the reasons why teachers leave the profession, and to meet an expressed need by administrators for criteria to assess teacher morale. Fifty areas of teacher dissatisfaction were isolated through analysis of research findings in the professional literature. These 50 points can be utilized as a check list if the following qualifications are presupposed: (1) The points are not considered as being either all-inclusive or necessarily deterministic. Each teacher and school is unique, therefore analogous areas of discontent may represent problems or issues in one school or district and not in another. (2) Some points may appear to overlap. They are included as separate statements because of the specific emphasis in the original research. (3) Only one or a few of the key, representative research studies are listed after each point. (4) The items are not necessarily listed in order of importance. (5) The "rightness" or "wrongness," or "appropriateness" of the points is not implied here. The items are meant to be purely descriptive of areas found by investigators to represent strong teacher feelings of dissatisfaction.

I. WORKING CONDITIONS

Physical Facilities and Materials

1. Inadequate and insufficient school supplies (Byrnes, Dennerlein, NEA, Shea).
2. Unsatisfactory plant facilities (Byrnes, DeShazo, Murray).
3. Inadequate teachers' workroom (Dennerlein).
4. Poor rest room and lounge facilities (Dennerlein, DeShazo).
5. Lack of, or unsatisfactory, janitorial services (DeShazo).
6. Poor parking facilities (Dennerlein).
7. Audio-visual materials inadequate because they were not available when needed (DeShazo).
8. Inadequacy of school libraries (DeShazo).
9. Lack of reference books and materials for teachers (Murray, Shea).
10. Outdated or inadequate textbooks (NEA).

Auxiliary Services

11. No special provision for either gifted or retarded in school program (Brown and Hedlund, Dennerlein).
12. Lack of psychological services or referral agencies for disturbed children (Shea).
13. Lack of substitute teachers (Dennerlein).
14. Unsatisfactory counseling facilities (Dennerlein).

Overload

15. Student supervision load too heavy (Bernard, Murray, Shea).
16. Insufficient relief from student contact (Brown and Hedlund, DeShazo).
17. Teaching causes such fatigue that personnel cannot enjoy afterschool social activities (Brown and Hedlund, P. Brown).
18. Too heavy extracurricular activity demands on time (Crane and Erviti, DeShazo, Shea, Stone).
19. Requirements to keep too many clerical records and reports (Manning).
20. Demands for heavy administrative duties outside of school hours (Shea).
21. No time for correcting papers, constructing tests, and preparing learning materials (NEA, Shea).
22. Too many different lesson preparations (Murray, Shea).

General Aspects

23. Inadequate salary (NEA).
24. Frustration at seeing high turnover among fellow faculty members (Dennerlein).
25. Unnecessary interruptions (Dennerlein).

II. ADMINISTRATIVE RELATIONSHIPS

Meetings

26. Faculty functions dominated by principal (Byrnes).
27. Unnecessarily prolonged professional meetings (Crane and Erviti).
28. Too many teachers' meetings (DeShazo, Manning).
29. Poor, or lacking in-service programs and leadership (Murray).

Assignment of Work

30. Teacher forced to teach in subject areas where he or she has had little or no training (NEA, Shea).

31. Unqualified teachers placed in counseling and psychometric positions (Shea).

Support and Leadership

32. Failure of administrator to back teacher with parents on issues such as promotion, school marks, discipline, and homework (Brown and Hedlund, Shea).

33. Lack of leadership on curricular and grouping issues (Manning, Shea).

34. Inadequate or insufficient supervisory assistance (Byrnes, Crane and Erviti, Manning, Shea).

35. Unfair, inconsistent, and vague administrative policies (Cross, Manning).

36. Lack of understanding by administrators of guidance and mental hygiene programs and principles (DeShazo, Shea).

37. Unconcern of immediate administrator for teacher's personal welfare (Manning).

38. Lack of immediate and long-range goal orientation, "last minuteness," (Murray, Shea).

39. Uncertainty where teacher stands in job (Brown and Hedlund, Byrnes).

40. Designated authority not commensurate with teacher's responsibilities (Shea).

41. Lack of policy on extra-pay positions and desirable assignments (Shea).

42. Failure to give guidance to beginning teachers on school policies and expectations (NEA).

43. Lack of democratic process regarding formation or change of school policies (Dennerlein).

Personal Aspects

44. Faulty principal-teacher relationships; e.g., principal is not friendly, has irritating personality traits, etc., (Andrus, Byrnes, NEA).

III. COMMUNITY CONDITIONS

45. Community unwilling to support efficient school system in terms of ability to pay (Brown and Hedlund).

46. Community and parental indifference to teachers' needs (Dennerlein).

47. Community restrictions on teachers' personal habits and social activities (NEA).

48. Poor prestige in community (Murray).

49. Community attempts to dictate what teachers should teach (NEA).

50. Lack of appreciative attitude on the part of parents towards the time, energy, and skill teachers devote to their work (Murray).

One should not conclude from the preceding points that the great majority of administrators are doing anything short of commendable to outstanding teaching work. Neither should the implication be drawn that a teacher's departure from the profession is due to a single cause. Teachers generally do not leave the profession for one reason alone, but for a multiplicity of frustrating circumstances that they encounter. Continuous, co-operative efforts on the part of school board members, individuals in the community, administrators, and teachers must be made to alleviate the cumulative dissatisfying effects of these problems. Certainly many of the straws that are breaking the backs of teachers today can be isolated, identified, and eliminated. Through enlightened understanding, then, the teachers, one of the nation's most important human resources, may be assisted in attaining the professional status they deserve.

BIBLIOGRAPHY

1. Andrus, H. G., "The Extent and Causes of Turnover Among Secondary School Teachers in New York State Central Schools for the Year 1948–49." Unpublished doctoral dissertation, Cornell University, 1951.
2. Becker, Howard S., "Role and Career Problems of Chicago Public School Teachers." Unpublished doctoral dissertation, Department of Sociology, University of Chicago, Chicago, Ill., 1951.
3. Bernard, D., "Extra Pay Versus No Extra Pay," *School Activities*, 24, Nov., 1952, 97–100.
4. Brown, Foster S., and Paul A. Hedlund, "Conditions that Lower Teacher Morale," *Nations Schools*, 48, Sept., 1951, 40–42.
5. Brown, Porter, "A Study to Ascertain Those Living and Working Conditions Which Teachers Believe Influence the Quality of Their Service and General Morale." Unpublished doctoral dissertation, Columbia University, 1950.
6. Brown, Richard F., "Problems and Difficulties of Teachers." Unpublished doctoral dissertation, University of Southern California, Los Angeles, 1951–52.
7. Brusch, Charles W., "Teacher Satisfaction and Teacher Complaints," *Phi Delta Kappan*, 22, Dec., 1950.
8. Byrnes, Arthur F., "A Study of Job Satisfactions and Dissatisfactions of Teachers in Selected Schools of Indiana." Unpublished doctoral dissertation, New York University, 1951.
9. Chase, Francis S., "Factors for Satisfaction in Teaching," *Phi Delta Kappan*, 42, Nov., 1951.
10. Coffman, William E., "Teacher Morale and Curriculum Development: A Statistical Analysis of Responses to a Reaction Inventory," *Journal of Experimental Education*, 19, June, 1951.
11. Cook, Walter W., "Minnesota Teacher Attitude Inventory Manual," *The Psychological Corporation*, 1951.
12. Cralle, Robert E., and William H. Burton, "An Examination of Factors Stimulating or Depressing Teacher Morale," *California Journal of Elementary Education*, 7, Aug., 1938.
13. Crane, Edmund R., and James R. D. Erviti, *Reasons Why Some Teachers Leave Public School Teaching*, University of the State of New York, The State Department, Division of Research, Jan., 1955.
14. Cross, Charles J., "The Teaching Difficulties and Teaching Effectiveness of Beginning Secondary Teachers Who Taught Classes Both in and out of Their Respective Fields of Preparation, with Respect to Certain Observable Factors." Unpublished doctoral dissertation, University of Arkansas, 1955.
15. Dennerlein, Gerald Edwin, "Factors Relating to the Measurement of Teacher Morale." Unpublished doctoral dissertation, University of Southern California, January, 1958.
16. DeShazo, Benjamin, "An Investigation of Elementary and Secondary Teacher Beliefs and Opinions about their Working Conditions." Unpublished doctoral dissertation, University of Oregon, 1954.
17. Graetz, Ralph C., "Factors Affecting the Retention of Men in the Teaching Profession — A Study of Milwaukee State Teachers College Male Graduates from 1932–1946." Unpublished doctoral dissertation, Michigan State College, 1952.
18. Hennings, A. G., "I Like Teaching But —" *School Executive*, 73, June, 1954.
19. Hilding, Arthur, "Limitations in the Elementary School Which Teachers Feel Tend to Retard their Teaching Effectiveness." Unpublished doctoral dissertation, Washington State College, 1953.
20. Husted, Orval, "I Was Driven Out of Teaching," *Nations Business*, 35, Jan., 1947, 62–67.
21. Irwin, Elizabeth, "Why Teachers Quit School," *Colliers*, 118, Aug., 1946, 20.
22. Kaplan, Louis, "The Status and Frustration of Men Teachers in Urban Elementary Schools." Unpublished doctoral dissertation, University of Southern California, 1947.
23. Kline, Frances G., "Satisfactions and Annoyances in Teaching." Unpublished doctoral dissertation, University of Wisconsin, 1949.
24. MacFarland, Lois, and David O. Wettels, "I'm Through with Teaching," *Saturday Evening Post*, 219, Nov., 1946, 16–17.
25. Manning, Walton, "A Comparative Study of Some Factors of Satisfaction and Dissatisfaction with Selected Rural and Urban Teachers." Unpublished doctoral dissertation, University of Indiana, 1954.
26. McCluskey, H. Y., and F. J. Strayer, "Reactions of Teachers to the Teaching Situation — A Study of Job Satisfaction" *School Review*," 48, Jan., 1953, 612–623.
27. Missouri State Teachers Association, *Why They Teach and Quit*. Columbia: the Association, 1948.
28. Murphy, W. J., "Who'd Want to be a Teacher? Yuk!" *School Executive*, 74, Oct., 1954, 62–63.
29. Murray, Thomas H., "An Investigation Into the Annoyances and Frustrations which Cause Alberta Teachers to Quit Teaching," *Alberta Journal of Educational Research*, Sept., 1953, 17–33.
30. National Education Association, Research Bulletin, *The Teacher Looks at Teacher Load*. Research Division, N.E.A., 17, Nov., 1939.
31. National Education Association, Research Bulletin. *Rural Teachers in 1951–52* (Washington, D. C.: Research Division, N.E.A., 31, Feb., 1953).
32. National Education Association, Research Bulletin, *Why Teachers Leave the Profession*. Research Division, N.E.A., Sept., 1953.
33. Poor, Gerald L., "A Study of the Extent and Causes of Teacher Turnover in Small High Schools of Michigan." Unpublished doctoral dissertation, University of Michigan, 1943.
34. Raphael, Winifred, "Grievances — Their Ascertainment and Alleviation," *Human Factor*, 11, Mar., 1937, 91–93.
35. Roth, Lester, "A Technique for Determining the Sources of Teacher Job Dissatisfactions." Unpublished doctoral dissertation, Stanford University, 1956.
36. Schubert, D. G., "Aspects of Teaching I Have Not Liked," *Educational Administration and Supervision*, 40, Apr., 1954.
37. Shea, John T., and Jack W. McLaughlin, "Teacher Dissatisfaction and Teacher Drop-Outs." Unpublished doctoral dissertation, University of Southern California, 1958.
38. Shipnuck, Murray, "Perceived Hostility in Administrator-Teacher Relationships in Elementary and Secondary Schools." Unpublished doctoral dissertation, Syracuse University, 1950.
39. Stinnett, T. M., "Don't Fence Me In," *Illinois State Normal University Bulletin*, special edition, Jan., 1953.
40. Stone, James C., *Supply and Demand: Certificated Personnel in California Public Schools, 1955, with Forecast for 1965–66* (Sacramento: Bulletin of California State Department of Education), 24, July, 1955.
41. Suggs, Mary F., "Persistent Problems of Teachers." Unpublished doctoral dissertation, University of Indiana, 1955.
42. "Teacher Morale is Improving, But —," *Nations Schools*, 41, Mar., 1948.
43. "Teacher Turnover: Survey of Teacher Turnover in California School Districts of Under 850 ADA.," *California Teacher Association Journal*, 46, May, 1950.
44. Wellbank, H. L., "Problems of High School Teachers," *Journal of Teacher Education*, 4, Sept., 1953.
45. "Why Teachers Leave." *Nations Schools*, 34, Sept., 1944.

The School Plant

A modern school building design utilizing concrete is featured in this month's SCHOOL PLANT section. The school, the Edward S. Ingraham Senior High School in North Seattle, Wash., features a hyperbolic paraboloid design for its auditorium which is part of the architects' attempt to add interest and variety to the student environment.

The June SPECIAL REPORT covers ways and means of providing a library in an elementary school which is without one. A leading librarian discusses the many problems connected with initiating elementary library services.

Another outstanding school in the June issue is the Hoosick Falls (N. Y.) Central School, which was constructed to meet the needs of a K-12 enrollment. A checklist for better school purchasing and an article which may help school officials choose the best architect for their school round out this month's section on school building.

North Seattle Senior High School

KENNETH R. MacDONALD

One of the most striking examples in the Pacific Northwest of modern school building design utilizing concrete has been completed in the new $3,420,000 Edward S. Ingraham Senior High School in North Seattle. The new school has a basic enrollment of 1500 students but can readily be expanded to handle 2000.

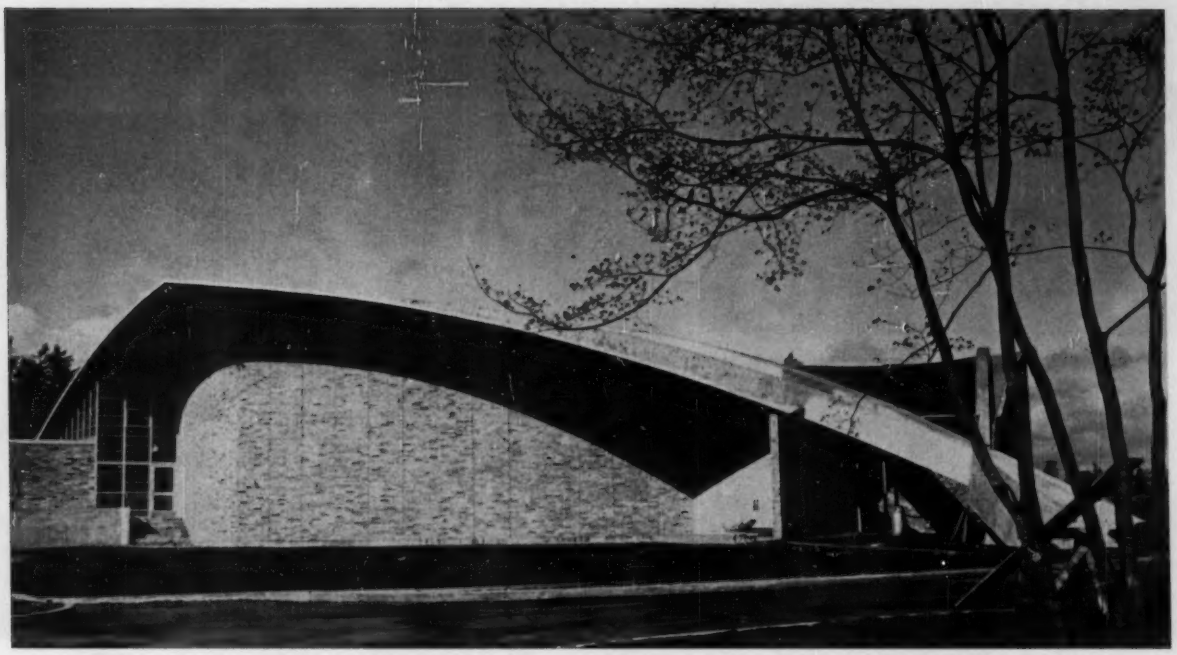
Designed by architects Naramore, Bain, Brady and Johanson, the school reflects many unusual uses of concrete. These include footings and floor slabs through pre-cast and pre-stressed beams and columns; poured-in-place classroom slabs; thin-shell barrel vaults with edge beams post-tensioned for the gymnasium roof; a thin-shell hyperbolic paraboloid roof over the auditorium; and reinforced concrete and expanded shale blocks and panels for the walls.

Architect Perry B. Johanson pointed out that with 207,648 square feet of usable school space, the construction cost amounted to only $15.78 per square foot.

"This school," Johanson continued, "was designed as a functioning senior high school complex in a large school system. The first unit constructed was intended to serve the educational needs of 1500 students with special facilities to permit inexpensive and speedy expansion when required.

"In the design, an effort was made, as a result of close collaboration with executives of the Seattle school sys-

A striking example in modern school building, the Ingraham High School in Seattle, Wash., was designed as a functioning high school complex in a large school system.



This is a view of the completed auditorium showing a portion of the hyperbolic paraboloid design and exterior facing of brick over the eight-inch shale block and reinforced concrete.

tem, to produce a building that would not be overpowering in scale and with the maximum attempt to add interest and variety to the student environment."

In the just completed North Seattle Senior High, there are 22 academic classrooms with space for the addition of 16 more. Also, there are now 32 special classrooms with room for three additional areas for science, business education and study halls.

Thus the current enrollment of 1500 students is adequately taken care of by 54 academic and special classrooms, but when student pressure demands, an additional 19 rooms are possible for a total of 73 teaching stations.

Single-floor, no basement, construction was used throughout generally to achieve simplicity and economy and particularly because the gradual slope of the site did not lend itself readily to more floors. Construction is all fireproof, of flat slab, reinforced concrete.

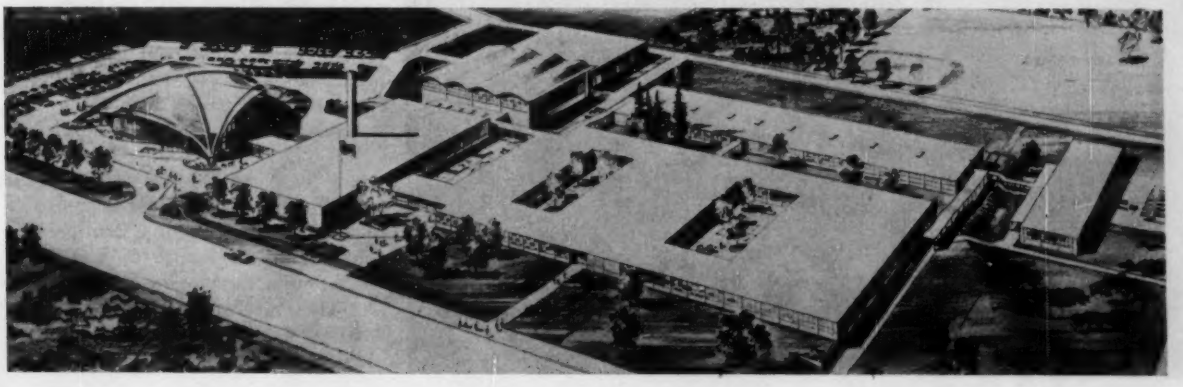
The compact plan arrangement of the interior was designed to keep the length of travel of both teachers and students to an absolute minimum for a school of such capacity. All of the classrooms have windows at exterior walls. However, the lighting has been planned to supply 100 per cent of the required illumination without dependence upon windows.

"With this kind of window arrangement," architect Johanson explains, "it is easier to darken the classrooms for audio-visual use and it is also possible to increase the depth of classrooms from windows to corridor wall for special uses."

The thin-shell concrete used for the auditorium, an essentially detached structure, is a hyperbolic paraboloid. This structural shape has three points of support and, Johanson contends, is well adapted to an auditorium of such large capacity where it is desirable to keep the rear seating as close as possible to the proscenium.

The underside of the shell is exposed concrete, forming an excellent shape acoustically for the distribu-

An architect's perspective of the Edward S. Ingraham High School in Seattle, Wash.



Above is an exterior view of the gymnasium and other portions of the new school.

The gymnasium (right) provides a clear span with no obstructions due to use of barrel vaults of precast concrete for the roof.

Costs
bid cost, $3,274,800
square feet, 207,848
capacity, 1500
cost/sq. ft., $15.76
cost/student, $1,950

Products

Heating: boiler, Kewaunee; convectors, Trane; unit heaters and ventilators, Herman Nelson; filters, American Air Filter

Electrical: lighting fixtures, Globe; clock and fire alarm equipment, Standard Electric Time Corp.; intercom and public address, Stromberg-Carlson; Fairplay scoreboards

Sanitary: fixtures and trim, American Standard; drinking fountains, Halsey Taylor; column showers, Bradley

General: insulation, Owens Corning Fiberglas; plaster, Kaiser; locks, Corbin; door closers, Norton; flooring, Azrock, Armstrong, and Goodyear; metal lockers, Berger Co.; folding doors, Holcomb & Hoke; wood doors, Roddis Plywood; laboratory furniture, Hamilton; auditorium seating, Heywood Wakefield

Shown is the interior of the auditorium of the new Seattle school which cost only $15.78 per square foot to construct.

tion of sound throughout the auditorium as well as decorative feature.

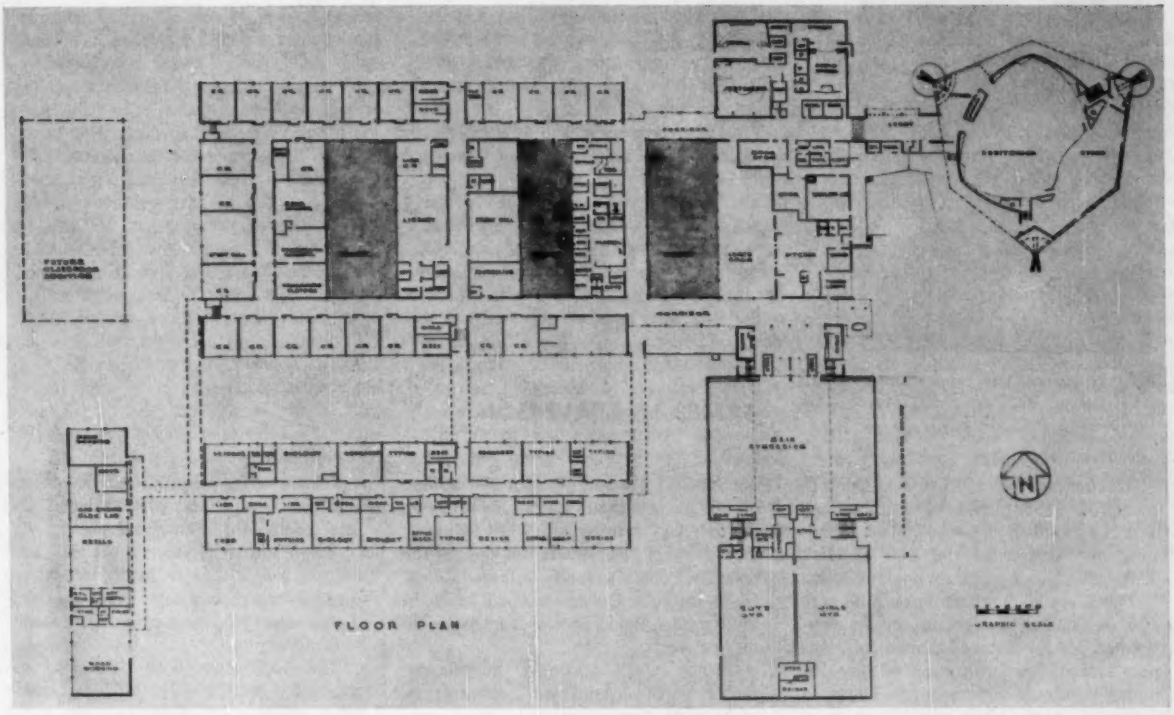
The gymnasium was constructed with thin-shell concrete barrels, poured in place for proper adaptation to the span involved. The edge beams were "post tensioned" after the barrels had been constructed. The folding partition is supported from the center edge beam.

Classroom and lunchroom wings were built of pre-cast and prestressed concrete columns and beams in order to keep down the beam depths. This design also has proved well adapted to repetition on a large scale.

An under the floor air distribution system has been used, generally eliminating unit ventilators. Both hot air and cold air are conducted through the underfloor tunnels in the center of each wing to continuous base grilles at the exterior walls. Several large fan rooms also have been dispersed about the buildings to serve this mechanical system.

The electrical system throughout utilizes a high voltage distribution of 480–277 volts, resulting in considerable reduction in the size and cost of distribution wiring. It was possible to utilize this kind of system because of the predominance of fluorescent lighting in the building.

The mechanical work required $684,300 of the total cost and the electrical system $226,441.



The floor plan of the school is shown above. It was designed by architects Naramore, Bain, Brady and Johanson of Seattle, Wash.

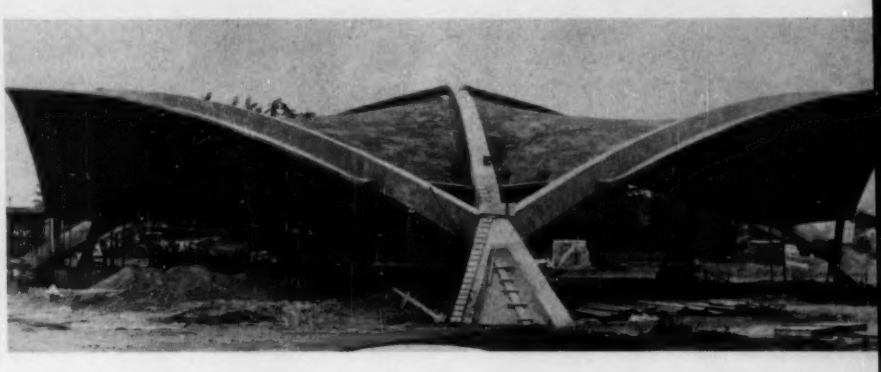
The poured concrete floors have a vapor barrier over six inches of gravel fill except in those areas where structural slabs were required. The exterior stiffener walls are of eight-inch shale block or reinforced concrete with brick facing. The filler walls are of four-inch pre-cast expanded shale panels, exposed aggregate, and the window walls are aluminum sash with pre-cast expanded shale panels.

Interior walls throughout generally are of expanded shale block except for special areas which are of brick and glazed block. Insulation throughout is of one-inch styrofoam on the perimeter of the floor slabs and one-inch fiberglass in the built-up type roof.

To provide the greatest possible economy and ease of maintenance, the floors generally are of asphalt tile with the exception of the hardwood used in the gymnasium and the ceramic tile in the toilet rooms. Ceiling finish is of acoustical tile.

The heating and ventilating system consists of a central steam boiler plant with low pressure steam distributed in the tunnels to fan rooms in each wing. The hot-cold tunnel plenums from each fan room supply the tempered air via underfloor tile ducts to perimeter grilles in each room where teachers have thermostatic control of the temperature. ■

Above is a science laboratory room which is being utilized for chemistry classes. Below is a view of the auditorium during construction.



Mr. Beaverson is supervising principal of Hoosick Falls Central School, Hoosick Falls, N. Y.

The Complete School

JAMES H. BEAVERSON

Meeting the needs of a K–12 enrollment of 1300 pupils in one building was the problem presented in the planning and design of the new Hoosick Falls (N. Y.) Central School building.

The $2,440,000 structure on a 44-acre site, scheduled for occupancy in September, 1961, combines thoughtful planning and efficient utilization of space to house pupils of different age levels in separate areas, while permitting easy access to common facilities.

Outside recreation areas are located so that secondary pupils are kept separate from elementary students; kindergarten pupils have their own play area. From the moment pupils get off the school bus, each of the grades is kept within its grade group with no occasion for mixing during the remainder of the school day.

Designed by W. Parker Dodge Associates of Rensselaer, N. Y., the building is composed of three distinct areas. Gymnasium, auditorium, cafeteria, and administrative areas are located in the central part of the structure From this two wings extend, one housing K–6 pupils; the other, pupils in grades 7–12.

The elementary wing consists of two floors of classrooms with grades K–3 on the first floor and grades 4–6 housed on the second floor. Each classroom on the first floor has separate toilet facilities. Every effort was made to design the primary rooms as self-contained units. Pupils in these grades will eat lunch in their rooms, being served from portable serving carts.

Unique in the design of the primary rooms is the island work counter in each room containing sink, work surface, and storage space for pupils' individual plastic tote trays. These units, thirteen feet long and three feet wide, are located four feet out from the inside of the corridor wall to allow pupils to work at all four sides.

Wardrobe storage for the primary grades is in open wood cubicle units located in the corridor. An elementary library is located on the first floor.

Seven classrooms for grades 7–8 are located on the first floor of the secondary wing with twelve rooms for grades 9–12 and a library on the second floor. Two study halls are provided, one on each side of the library to allow pupils easy access to the library.

Two homemaking rooms and one art room are on the first floor of the center part of the building. Three science rooms, one for physics and chemistry, one for biology and earth science, and one for general science, are above.

Two industrial arts rooms, an agriculture room and a music room are located together away from the academic areas to keep noise disturbance to a minimum.

The auditorium with a seating capacity for 700 provides for a full-width stage opening by eliminating the usual proscenium arch. The front stage curtain may be opened to the full width of the stage to allow for such large group presentations as band concerts. The curtain may be partially opened, and together with various combinations of back draperies, permit the usual settings for dramatic productions.

The gymnasium seats 700 on folding bleachers along both side walls. A folding wall divides the area into two teaching stations. A separate visiting team room is provided in the boys' locker room area so that visiting athletic teams do not have to use the girls' locker room facilities. This room will also be utilized for locker and shower purposes for the adult physical education program.

All general administrative services are located in one area with separate offices

Below is the architect's perspective of Hoosick Falls (N. Y.) Central School.

provided for the school nurse, dental hygienist, guidance director, high school principal and district clerk. The office of the supervising principal serves double duty as a conference room to be used for meetings of the Board of Education and other groups. The elementary principal's office is located in the elementary area of the building.

General construction details of the building feature terrazzo floors in all corridors as well as the cafeteria. Classroom floors are of vinyl tile. Corridor walls are of exposed cinder block with a four-foot ceramic tile wainscot.

Unit ventilators are provided in each classroom and are zoned to permit night heating of only those areas to be used for after school functions.

All ceilings are of acoustical tile fiberglas ceiling board. Such construction allows for easy maintenance access to electrical service overhead.

The same consistent search for educational value, economy and low maintenance has been carried through into the mechanical design of the structure. The heating system operates on the most economical fuel available. The electrical system distributes electrical service at 440/277 volts instead of the more conventional 208/120 volt system. Student spaces are lighted with fluorescent lights operating at 277 volts instead of the usual 120 volts. In order to provide service voltages for convenience outlets and small motor loads, small remote transformers are located throughout the building near the points of use. This system has realized a saving of about 20 per cent in the electrical contract. Instead of heating all hot water in the boiler room and distributing heated water throughout the building, hot water, as required, is heated near points of use in romote water heaters. This will realize savings not only during the school year but during the summer and vacation periods when only the water used for maintenance purposes need be heated.

The planning and design of the building was a co-operative venture. A citizens committee was appointed by the board of education to make a thorough study of area school construction and recommend general construction features to the Board of Education and the architect.

Each department of the faculty had a hand in planning the building. Special area teachers such as science, industrial arts, homemaking, etc., frequently discussed room layouts and special equipment desired.

To the Hoosick Falls district, the new school plant is a great step forward. The present school population is housed in 13 separate school buildings. Most of these buildings were constructed in the early 1900's and have outlived their original usefulness. The new structure will provide for the modern educational needs of the 100-square-mile district. ■

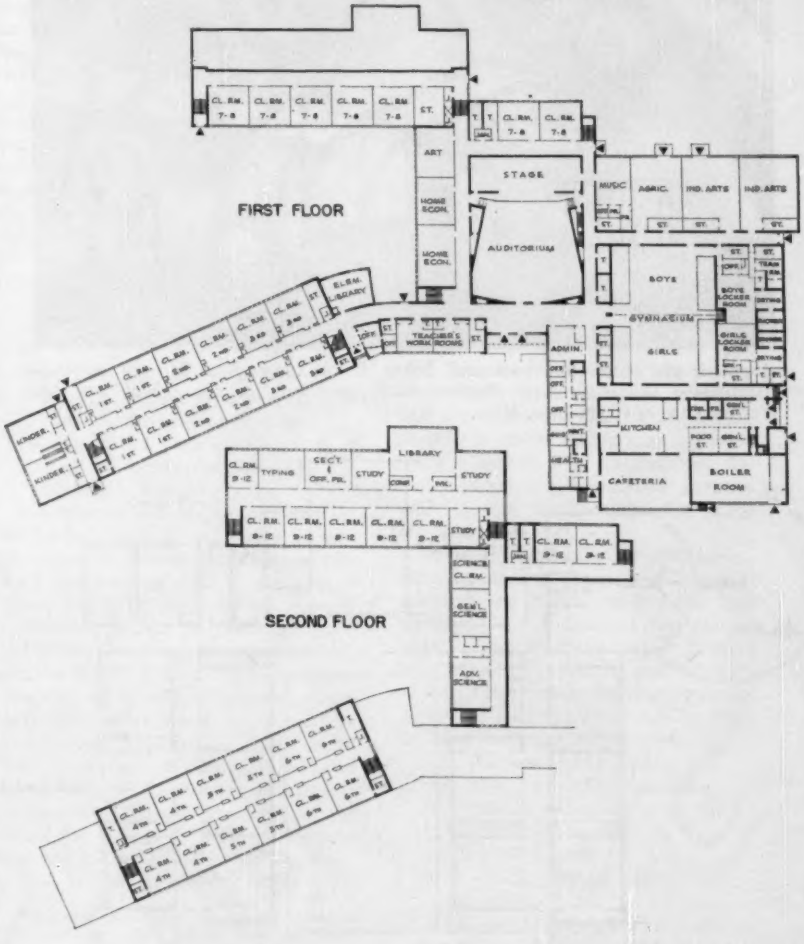
Facilities
offices, 7
classrooms, 39
art room
commercial rooms, 2
laboratory rooms, 3
libraries, 2
music room
study rooms, 3
kindergartens, 2
industrial arts, 2
agriculture room
home economics, 2
teachers' rooms, 2
kitchen
auditorium (seating 700)
gymnasium (seating 800)
cafeteria (seating 350)

Cost
bid cost, $1,960,000
square feet, 122,040
capacity, 1300
cost/sq. ft., $14.70
cost/student, $1,381

Construction
exterior design: face brick and aluminum window wall with porcelain panels
roof: built-up
corridor and stair finish: terrazzo floors and precast terrazzo treads with nonslip nosing
classroom floors: vinyl abestos tile
auditorium floor: concrete and vinyl asbestos tile
gym floors: maple
toilet room finish: ceramic tile
lighting: fluorescent
heating: hot water

Products
Heating: boiler, Cleaver Brooks; ventilators, Herman Nelson; controls, Johnson Service
Sanitary: toilets, Eljer; flush valves, Sloan; towel fixtures, Logan Manufacturing Co.
General: cabinets, Brunswick; gym equipment, Medart; bleachers, Wayne Iron Works; pupils' desks, Heywood Wakefield; auditorium seating, Peabody; cafeteria tables, Howe; chemistry tables, Royal Manufacturing Co.; library shelves, Sjostrom Manufacturing Co.

The floor plan of the Hoosick (N. Y.) Falls Central School is shown below. The building was designed by W. Parker Dodge Associates of Rensselaer, N. Y.



Building For a K-6 Program

THOMAS KRAKKER
Mr. Krakker is superintendent of schools in New Boston, Mich.

Crowded schools and an increasing enrollment brought about the planning and construction of the Riverside elementary school in the Huron School District of New Boston, Mich.

Dedicated in December, 1960, the building is designed to accommodate 500 students in a kindergarten to sixth grade program. In addition to classroom units, the following facilities were included: administrative (including a health room); a multi-use room, with kitchen facilities, and a library.

Special features of the plant include the following designs:

1. The kindergarten is remote from the other units and has its own outside play area.

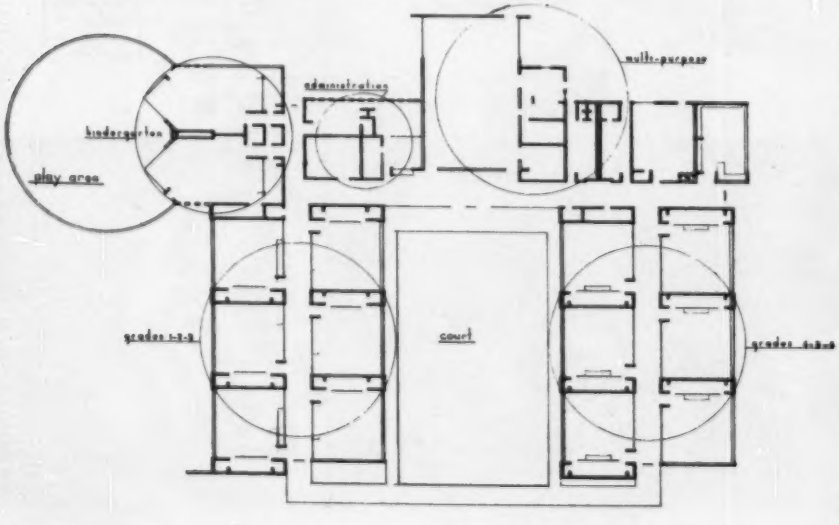
2. First through third grade classrooms are in a separate wing, and self-contained with their own separate toilet facilities.

3. Fourth through sixth grade rooms are in close proximity to the library, and the gang toilet facilities, as these rooms are not self-contained.

4. The multi-use room is located between the two wings and is accessible from all classroom units and from the outside without passing through other units.

In keeping with sound planning, architect Jack Weston Yops, of Wyandotte, Mich., has designed sufficient utilities to facilitate the addition of a six-classroom wing in the future.

Above is the multi-use room and below is the floor plan for the Riverside Elementary School in New Boston, Mich. Architect for the school was Jack Weston Yops of Wyandotte, Mich.



Facilities
offices, 2
classrooms, 10
kindergartens, 2
library
multi-use (seating 300)
kitchen
storage

Costs
bid cost, $387,192
capacity, 500
square feet, 28,000
cost/sq. ft., $13.90
cost/student, $774

Construction
exterior facing and trim: brick and aluminum
construction: structural steel
roof: built-up, tectum deck
corridor finish: vitreous wall coating
classroom finish: painted masonry units
floor covering: asphalt tile
restroom finish: terrazzo and vitreous wall coating
lighting: fluorescent
heating: gas-fired, forced hot water

Products:
Heating: controls and ventilators, Herman Nelson; boiler, Cleaver-Brooks; temperature control, Powers Regulator Co.
Electrical: clocks and fire alarm systems, National Time & Signal Corp.; radio installations, Rauland-Borg.
Sanitary: toilets, urinals, Briggs Manufacturing Co.
General: duplicating machines, Heyer; furniture, Brunswick; cafeteria tables, Schrieber Sales; cooking ranges, South Bend; dishwashing machines, Hobart; refrigeration, Foster; basketball backstops, Medart; library furniture, Stacor; asphalt tile, Armstrong; folding partitions, Pella.

special report

From Cupboards to Elementary School Libraries

By using imagination and initiative, administrators can furnish an elementary school with a library even though the school's plans did not provide for one.

M. BERNICE WIESE

Miss Wiese is director of library services of the Baltimore Public Schools.

"Where there is a will, there is a way" is a true saying for those who want to have a library in an elementary school building, where plans did not provide for one. First, the building must be explored with an imaginative eye from cellar to roof and in every nook and cupboard. Unused stairways, landings, storage rooms, dead-end corridors, coat rooms, classrooms, and many other odd spots combined, extended, and planned can be developed as attractive and functional libraries. It is important to visualize possibilities in terms of removing partitions, providing archways, combining adjacent areas. Use of imagination will reveal in color the changes that can be made with paint, window decorations, lighting, and floor covering.

Before proceeding any further in obtaining library space, it is necessary to re-emphasize the reasons for an elementary library in terms of the educational program. Today, quality education is demanding wider use of books and audio-visual materials, making the school library a vital resource for instructional purposes. No classroom is large enough to contain all the books needed by 35 children, who are reading on three or four levels and seeking information on many topics during the school year. Nor will the classroom contain all the recreational books to meet the individual tastes and interests of every pupil for a whole year. Centralizing library materials, books magazines, pamphlets, and audio-visual materials, is the most economical and efficient method of supplying a school's demand for supplementary and enrichment materials. By organizing and indexing these materials all pupils and teachers can share them and have easy access to them.

How Much Space Is Needed?

Before embarking on an exploratory trip to locate space in the building for a library, it is wise to examine the requirements for a functional library. The appendix in *Standards for School Library Programs** describes the policies and specifications for library quarters and equipment for schools having 200 or more students as recommended by the American Association of School Librarians. The suggested space allotments can serve as helpful guides, even though existing school buildings may not permit flexibility to obtain the total desired space. Remodeling plans usually require adaptations to existing realities.

Floor space to seat at least one class is needed in addition to space for a work area. The American Library Association recommends a minimum of 30 square feet per reader with room to seat the largest class and 20 additional students plus conference and work areas. If the school includes audio-visual materials with the printed materials, storage space for these must be provided. Library facilities could be provided in space totaling 1360 square feet, with suggested divisions as follows:

840 sq. ft. for the library room
120 sq. ft. for conference area
200 sq. ft. for work area
200 sq. ft. for storage area — for audio-visual materials

Compromise and adaptation being essential ingredients in remodeling, it may be necessary to reduce the size of the work and conference areas for lack of space, but a library room the size of a classroom should be obtainable.

Shelving capacity is estimated according to the size of the book collection and the enrollment. Current standards call for ten books per pupil with a minimum collection of 6000 books. Each book shelf will hold 30 books of regular size or 60 primary and picture books. Approximately one third of the books for a six-grade elementary school will fall in the picture book category.

The amount of shelving space available can be determined by figuring how many three-foot widths can be placed around the walls of the room. In small quarters, additional shelving can be squeezed in by adding several low sections of island shelving in the center of the floor or as extensions from the wall near doorways. The island shelving should not crowd seating space. If shelf space is limited, it is essential that six-foot high shelving be used on all solid walls to gain maximum housing space for books.

To house a collection of 6000 books, including picture books, it will require approximately 30 units of five-foot high shelving plus 12 units of low picture book shelving 36 inches high *or* 25 units of six-foot high shelving and 12 units of low picture book shelving 36 inches high. The following table may be helpful in estimating shelving needs:

5 ft. shelving — 150 books
6 ft. shelving — 180 books
36 in.–39 in. — two shelves — 60 regular size books or 120 picture books
40 in.–45 in. — three shelves — 90 books

Work and storage areas are based on the amount of space needed for sink,

* American Association of School Librarians, *"Standards for School Library Programs,"* 1960. American Library Association, pp. 119–128.

work counter, typewriter desk, and storage cabinets for supplies, filmstrips, recordings, and other audio-visual materials and equipment.

Conference area requires space for a table where six to eight students might work together as a group using books and materials for a class or group project. Such groups may be in addition to the class using the library. In remodeled areas it may be more difficult to arrange sufficient space to include this area. Conference space could be located at one end of the work room or be arranged as an alcove in the reading room, if such adaptations were feasible.

Looking for Space

With these sizes and needs in mind, the search for places to locate the elementary school library can begin. Some schools may have vacant areas resulting from changes in school populations or curriculum, or the opening of new school buildings in adjacent neighborhoods. Following are some areas in old buildings that have become full fledged elementary libraries:

Abandoned classrooms including undersized, average, and oversized rooms. These are more desirable if cloakrooms, storerooms, or dead-end corridors are adjacent. Kindergarten rooms make good libraries because they are oversize and usually have additional cloakroom space. Unused home economics and shop rooms have the same advantages plus plumbing connections.

Auditoriums have some limitations but have been converted to libraries successfully in some places. Conference rooms and work areas can be developed on the auditorium stages.

Gymnasiums have high ceilings and offer lighting problems, but good planning, imagination, plus extra funds can work miracles.

Cafeterias no longer used as such offer advantages including running water, supply cupboards, and partially partitioned areas. Under no circumstances should libraries be housed in cafeterias still being used as lunchrooms, because it is impossible to provide adequate library service and to avoid book losses in the dual use of these facilities.

Nooks and crannies are available in most schools, but unfortunately these are smaller areas and it is necessary to locate several adjoining ones before conversion into library quarters is possible. These include storerooms, small teachers' rooms, and ends of corridors that can be blocked off without violating building codes. Basements and attics are not favorably located for accessibility and usually have lighting problems. However, a few schools have created attractive library quarters in these spaces with paint, improved lighting systems, and new floor coverings. Basement space should never be considered, if excessive moisture is a problem, because dampness will damage books.

Making the Changes

One of the first decisions to be made is whether to eliminate a wall or to build one. It is important to keep in mind that you want a school library, that is as large and spacious as possible, so that it invites comfortable use and its service to children is not handicapped by crowded tables, bookshelves, and equipment. If walls cannot be removed, it is possible to cut a six to nine foot wide archway through a sustaining wall.

If the library quarters must remain small, a tiny work area or conference area can be provided by creating alcoves or nooks with counter height shelving to form an "L," a triangle, or a square. If partitions are built to separate the workroom and the library, it is essential that the middle portion of the partition be made of vision glass for easy supervision. Sliding partitions or accordion doors may solve the problem for a school with dual use for part of the same space.

Reconditioning floors in old buildings is worth the expense, especially if the floors are uneven, dingy, and full of splinters. The most satisfactory, and possibly the least expensive covering in the long run, is vinyl tile. The colors and patterns can be selected to harmonize with the general decorative scheme to add to the attractiveness of the remodeled quarters. Vinly tile floors help to control sound and make maintenance easier. Rubber tile may control sound to a greater degree, but will tend to carry imprints of tables, chairs, and heavy furniture.

The general library atmosphere will be influenced by the brightness or darkness of the room. It goes without saying that the room must have good lighting for reading. Windows, height of ceilings, size of room, wall color decorations, and doors affect library lighting as they do all room lighting. It is wise to consult a lighting expert in your community for the newest lighting techniques. Not all types can be adopted economically in old buildings, such as the recessed ceiling type, but improvements can be made. Some old buildings have unusually high ceilings. For these lowered lights are essential and special attention should be paid to a decoration scheme which will offset the height. A feeling of lightness can be obtained by painting walls in pastel shades and woodwork and trims in light contrasting colors, or colors a shade or two deeper than the wall colors. Partial glass for exit doors, light window shades or ventian blinds will add to the illusion of lightness. If workspaces are being provided in high ceiling areas, avoid separation by walls and substitute seven foot high partitions, including glass panels for the upper half. Consideration should be given to lowered ceilings with sound proofing material, which will promote a quieter, cozier library atmosphere.

Pipes in corners, along ceilings, under windows can be a nuisance, especially in spots where shelving could be placed. Careful planning might include ways and means for building shelving around these obstacles. All heated pipes should be covered.

Several electrical outlets should be provided in convenient locations in the reading room and workspace, so projectors and audio-visual materials can be used effectively and so electric pencils and erasers can be used in processing books.

Local fire regulations and building codes will determine the number and kind of doors and exits required in public buildings. Generally, one exit in a room the size of a classroom will be sufficient; larger spaces will require two doors. When the library reading room and workroom are adjacent, a three-foot entrance between the two may be adequate and a door unnecessary. Easy access and adequate space (a door swings on a three-foot arc, thus demanding that much floor space) are more important than a door. There is little need for separating the workroom from the library by a locked or closed door. A separate exit from a workroom to a corridor is very practical, if this can be provided within the remodeling budget. Frequently, in combining classrooms to form a large library, too many doors may exist for good supervision. Any surplus doorways could provide additional space for shelving or library equipment without requiring removal of the door.

In some old buildings all or parts of out-of-way stairways and adjacent hallways can be converted into library quarters. A local builder can suggest adaptations. Spaces under stairways are ideal spots for storage cupboards, sliding trays, or drawers. Converted hallways can become work spaces, conference areas, or can be combined with adjacent rooms to form a larger library room.

Dumb-waiters, shallow cupboards, recessed entrances, eaves under sloped roofs provide much needed storage space. Space for a library may be worked out when the school is planning for other remodeling projects. On occasion, libraries have been converted from principals' offices or teachers' rooms, when newer quarters are provided for those purposes.

In the age of "do-it-yourself" and with a deluge of books on "how-to-do-it," it is only logical to consider built-in facilities for the remodeled library. The efficient kitchen arrangements featured in leading magazines have many hints for the designer of both new and remodeled school libraries. The kitchen cabinet principle can be adapted to the storage requirements and working needs of a library. Every library needs a sink and running water, a work counter, cabinets for supplies, drawers for posters, maps, and supplies, shelving for books in preparation, and facilities for holding filmstrips, recordings, etc. Using library specifications and working under the guidance of a trained librarian, a local carpenter can build adequate facilities.

If work space is limited, a hinged counter can be attached to a wall, so that a work counter is available for processing books and materials. It can be dropped flat against the wall, when not in use and when floor space is desired. Existing cupboards equipped with shelves and drawers may substitute for workroom storage space and reduce the amount of space for a work area to the needed minimum.

In situations where the only space available is equivalent to one classroom, some adaptation of one or two shelving sections may be considered in providing special cabinets to store supplies, recordings, etc. Shelving heights can be increased to 6½ feet with a fixed top shelf and a hinged door faced with tackboard. These cupboards can house supplies and at the same time provide small bulletin boards. If the lower half of the shelving section is made 15 inches deep and is provided with five vertical plywood dividers, it can be used for the storage of recordings. This section can be made with doors for top and bottom sections. Standard shelving can be converted into units for recordings by inserting units sold commercially as slide-in shelving units.

Most libraries prefer to display magazines in shelving sections with slanting shelves. Space can be saved if several sections of low shelving are made with sloping tops for displaying magazines and picture books. Keeping back issues of magazines for reference use is a problem in any library. It is possible to construct the magazine shelving with storage space behind the slanting shelves. These shelves can be made to swing out for access to the storage space. Because the depth of the shelving must be 18 inches, these sections are too bulky for a small area.

Counter height shelving, 36 to 45 inches high, can be used as room dividers to separate work or conference areas from the reading area, if space is not large enough to create separate rooms. Counter height shelving offers interesting possibilities for room arrangement, for creating browsing corners and counters for attractive book displays.

Window seats are favorite spots for children. These are easy to build between ventilators and other projections. The seat should be an appropriate height for elementary children and the back should be slanted for comfortable seating. If the seat is hinged, the space beneath will be accessible for storage of supplies. Foam rubber cushions covered in a gay colored plastic or drapery material will add to the attractiveness of this browsing nook.

Library furniture from library equipment companies is attractive, well made, and durable, and should be considered first in equipping remodeled libraries. Schools with limited budgets can obtain chairs, tables, filing cabinets, and stools from school equipment suppliers. Many types of tables make interesting library arrangements, so it is not necessary to use only traditional rectangular library tables. Trapezoid tables suggest arrangements in combinations of two, three, or four. A round table or two placed in the center, in a browsing corner, or in a reference section can break the monotony of rectangular tables. Rectangular tables 30 by 60 in., or 36 by 60 in., are preferred for maximum seating, but it is wise to include one or two 24 by 42 in., tables for flexible arrangements. Rectangular tables, 36 by 72 in., are too large for elementary libraries.

If window seats are not included in remodeling, one or two small lounge or informal chairs will be conducive to reading for pleasure. Plastic covered "TV" chairs are inexpensive and colorful.

Library circulation desks are expensive and bulky for small elementary quarters. A teacher's desk will serve satisfactorily as a circulation desk. Librarians prefer desks with one drawer deep enough to hold the circulation trays but, in most elementary schools, one or two trays are sufficient and these can be used on the top of any desk.

Two book trucks are essential in an elementary library. Trucks should be constructed for library wear and tear and equipped with rubber-tired ball bearing swivel wheels for maneuverability and with rubber pads for protection against bumping furniture. Small metal trucks with two shelves are practical and maneuverable in small areas.

The card catalog must be ordered from a library equipment company, since it is a precision built item. Metal card catalogs are slightly less expensive than wooden cases.

Stools, both low and high, are used for a variety of purposes, such as reaching books on high shelves, selecting books from bottom shelves, or browsing in corners.

Library equipment companies are most co-operative in library planning. For schools with budgets large enough to finance the best in furniture and equipment, these are the ideal sources of supply.

For schools with space and no funds, some equipment can be converted from stock available. These items can be used until funds for library equipment are available.

The best advice to schools without a budget for furniture is to formulate a five-year plan. It should include ways of raising money, so that a systematic attempt can be made to obtain library furniture and library quarters. ■

Do's for Acquiring a School Library

— do study the 1960 School Library Standards in *Standards for School Library Programs* and adapt them to the local situation.

— do study the needs of the instructional program in relation to its need for library materials and services.

— do use the resource help available through (1) the state library extension agency, (2) city or county school library supervisor, (3) professional librarians in the school system or nearby school systems, and (4) the American Association of School Librarians.

— do use imagination and visualize adaptation, refinishing, and painting.

— do enlist aid from teachers, administrators, parents, students, and the community.

— do plan carefully for immediate and long-range use.

— do select the most functional plan for long-term use after exploring all possibilities and variations.

— do be alert to immediate and unexpected opportunities.

— do take the initiative and advance beyond the talking stage to the doing stage.

— do have hope!

A Check List For Better School Purchasing

L. V. TAYLOR

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The author presents a checklist by which school systems may analyze their procurement performances item by item to improve school purchases.

The following check list represents a guide to better school purchasing. Each school system should analyze its procurement performance item by item as given on the check list and answer *yes* or *no* as it applies to that particular school system. It is believed that a school system will be most efficient if it can answer *yes* to all items. The items that are answered *no* should be studied for the possibility of improvement.

Procurement Check List

Organization

1. The school board has centralized the procurement function.
2. The title of the position indicates the duties to be performed. (business manager, purchasing agent)
3. The appointment of the person responsible for procurement is in writing. The appointment contains:
   a) name of the appointee
   b) date of appointment
   c) limitations which board wants to impose on the agent
   d) main duties and responsibilities
4. The procurement officer is delegated certain authority. Specific grants of authority have been made to:
   a) purchase certain items and amounts
   b) enter into negotiation with vendors
   c) approve or disapprove quality, price, etc.
   d) do any acts necessary to carry out his job not prohibited in the appointment
5. The delegation of authority is in writing.
6. The procurement officer is either the superintendent or someone responsible to the superintendent.
7. The superintendent recommends and the board appoints the procurement officer.
8. A permanent "supply committee" has been set up.
9. A committee or committees is/are set up to plan for and
10. Each employee is given some understanding of the organization for procurement.
    a) Handbooks or written instructions are provided.
    b) Instruction on forms and use of forms is given.
    c) Channels and procedures are given.
11. The special knowledge and skill of all staff members is utilized in the procurement process.
    a) by written suggestions
    b) by committee decisions
    c) by informal methods
    d) by personal consultation
12. Lines of authority are clearly outlined
    a) in writing
    b) by organization charts
13. Channels of communications which allow for a free two-way flow of information are in operation.
14. A centralized office or work area for procurement has been established.
    a) The area is conveniently located for users.
    b) The area is convenient for salesmen.
    c) The area is labeled or identified.
15. Instructional materials are selected on the basis of the educational objectives of the school system.
    a) Objectives are set forth in writing.
    b) Long-range, intermediate, and immediate goals are set up.
    c) Objectives are detailed enough to serve as guides and working tools.
    d) Objectives have been determined by co-operative action to help secure acceptance.
16. The organization provides for the procurement performance to be evaluated periodically.
    a) A guide for evaluation has been established.
    b) The results of the evaluation are made known to procurement personnel.
    c) Corrective action is taken where needed.

Determination of Quality and Selection of Materials

1. Use and conditions are used to determine best quality.

2. Qualities for selection of materials have been established.
   a) Standard products are used if possible.
   b) Durability is considered.
   c) Labor saving features are considered.
   d) Ease of use is considered.
   e) User satisfaction is considered.
3. Testing of samples (e.g., chemical, physical, or performance tests) are carried out before materials are purchased or put on the "approved list."
   a) Samples for testing are available.
   b) Tests show whether or not quality is suitable.
   c) A basis for judging tests has been established.
   d) Testing equipment is available.
4. A simplified list of materials has been developed.
   a) The minimum number of sizes and grades consistent with educational goals has been set up.
   b) This list compares favorably with such lists from other schools.
5. A standardized list of quality items has been established for each grade, subject, or field.
   a) Standardization does not interfere with instruction.
   b) The number of items are great compared with items not on the list.
   c) The number of items compare favorably with the number on standard lists of other schools.
6. Definite responsibility is fixed for the determination of quality for all purchases.
7. Specifications have been developed and are used in the purchase of major items.
   a) Specifications are clearly written.
   b) Specifications are revised as needed.
   c) Specifications are fair to all vendors.
   d) Specifications are adhered to strictly.
   e) Specifications describe the method of testing.
   f) Specifications are on file.
   g) Specifications make delivery conditions and terms clear.
   h) Specifications contain special terms and conditions.

Selection

1. Quantity is determined on a per pupil, per grade or subject basis for the entire system.
2. A schedule or calendar has been set up for requisitioning materials.
   a) to be purchased
   b) from the warehouse
3. A schedule or ordering throughout the school year instead of all ordering during the summer has been set up.
4. Records of past years' usage are used as a guide for budget planning.
5. The purchase of major items are made on bids.
6. Bids are solicited from several reputable vendors.
7. An approved list of vendors is maintained as a tool of purchasing.
8. Standard bid lists and quotation forms are used.
9. Bids are opened at a definite time and place at which vendors may be present.
10. Orders are always placed with the lowest bidder that meets specifications.
    a) Local vendors compete on the same basis as others.
    b) No favoritism is shown brands or salesmen.
11. Performance bonds or certified checks are required of bidders on large items only/or as required by law.
12. A system of ordering "rush" or "emergency" items has been established.
    a) These orders must be justified by user.
    b) These orders are kept to a minimum.
    c) Special approval is required for these orders.
13. The building principal has the authority to approve or disapprove all requisitions from users in his building.
14. Teachers and custodians are not allowed to make purchases of small items.
15. A "petty cash fund" for small item purchase has been established in and administered by the purchasing office.

Procurement Policies

School Board Policy

1. The school board has written procurement policies.
   a) The board recognizes the procurement function as an important part of administration.
   b) Every contract is a sacred obligation.
   c) The procurement officer makes vendor recommendations.
2. The board has established policies concerning local buying.
   a) Local vendors must compete on an equal basis with others.
   b) Local vendors are favored, other things equal.
   c) Local vendors are treated fairly and courteously.
   d) The board acts only through established channels.
3. The board has established policies concerning bid buying and bid acceptance.
   a) The board has set up policies on what items will be purchased on bids.
   b) The lowest bid that meets specifications is accepted.
   c) Board policy is made clear to all vendors.
   d) Board policy is made known to the community.
4. The board has policies concerning items which may be purchased without bids.
   a) Items are clearly set forth.
   b) Reasons for buying without bids are made clear.
   c) A system to guarantee full value for money spent has been set up.
5. The board has established a policy concerning amounts that may be contracted for without prior board approval.
   a) The amount is clearly set forth.
   b) The person authorized to make the contract is made known to vendors.
   c) Procedures for board approval, after the transaction, are set up.
6. The board operates on the policy that users should have a voice in the determination of quality and quantity.
7. The board has a policy of review and control for budgetary purposes.
8. The board has established a policy concerning the evaluation of the procurement function.
   a) A written evaluation is made.
   b) The evaluation is made by someone outside the procurement office.
9. The board has established policies concerning the purchase of personal items for the staff through the procurement office.
   a) Personal items are not purchased.
   b) No false affidavit is made by school officials or teachers.
10. The board has established policies concerning the acceptance of gifts.
    a) School board members do not accept gifts or financial reward.
    b) Staff members are not allowed to accept gifts.
    c) Families of school personnel are not allowed to accept gifts from suppliers.
11. Educational policies govern the procurement of materials.
12. Efficiency and good rules of business administration are provided for in policy.
13. The board policies allow for competition, and promote fair and legal business practices.

Administrative Policy

1. The superintendent has established administrative policy concerning the method of quality and quantity determination.
   a) Users have a voice in determination.
   b) Determination of quality for all items is definitely fixed.

2. The superintendent has established policy concerning organizational structure and lines of authority and responsibility.
   a) Lines of authority and responsibility are fixed.
   b) Line and staff functional relations are made known to all employees.
   c) Lines of authority and responsibility are made known to all concerned.
3. The superintendent has established policy concerning selection and expenditure that keeps the total amount within the limits of the established budget.
   a) Budgeted amounts are made known to all who must operate within the limits set up.
   b) Periodic reports of budget performance are sent to all who need to know this information.
   c) Records and reports are used for control.
   d) Budgetary limits are definite and fixed.
4. All administrative policy is in writing.
   a) An administrative handbook is used.
   b) Written rules and regulations are in use.
   c) Written information is disseminated to all who need to know.
5. Administrative policy is broad enough to allow subordinates to make decisions and to act in the accomplishment of the assigned work.
6. Authority for the enforcement of policy, rules and regulations has been established.
7. The administrative policy allows for all staff members who are affected by the policy to have some voice in policy formulation.
8. Policies are sufficient for the guidance of the work but not so numerous as to hinder or slow performance.
9. There are definite administrative policies concerning testing of materials.

Procurement Office Policies

1. The procurement office has established policies concerning relations with vendors.
   a) All vendors' representatives are seen and heard if possible.
   b) No favoritism is shown because of personality of salesmen.
   c) Communications from vendors are answered or acknowledged promptly.
   d) New salesmen are given a chance to show their products.
   e) New products are given consideration and tested for quality.
   f) All contacts with vendors are through the procurement office.
2. The procurement office has established policies concerning office methods, procedures, and operation.
   a) The flow of work is outlined and made known to all concerned.
   b) Personal responsibility is fixed for each job or piece of work to be done.
   c) Machines are used wherever possible to save labor and promote speed and accuracy.
   d) Hours of operation are logical and made known to all.
   e) A system of uniform forms has been developed.
   f) Only the information to be used is asked for on any form.
   g) Personnel are trained in courteous and efficient service to all others.
   h) Personnel are acquainted with their service to the major objectives of good education.
3. The procurement office has established policies concerning sources of information.
   a) Catalog files are up-to-date and easy to use.
   b) Professional publications are subscribed to.
   c) Trade directories are in the office.
   d) A commodity file is kept.
   e) The procurement officer is a member of ASBO.
   f) New books, pamphlets, etc., are on hand.
   g) Salesmen are used as a source of information.
   h) Visits to factories, exhibits, etc., are made regularly.
   i) The procurement office is active in seeking new information and does not just wait for it.
4. The procurement office has an established policy concerning selection of vendors.
   a) All vendors are given equal and fair treatment.
   b) Several reputable vendors are solicited for all major purchases.
   c) A definite policy of selection is in operation.
   d) The selection policy is made known to all vendors.
   e) A vendor file is maintained.
   f) The community is informed of the methods used in vendor selection.
   g) Unethical and dishonest vendors are eliminated from consideration.
5. The procurement office has established policies concerning the gathering and dissemination of procurement information.
   a) The dissemination of information is the fixed responsibility of one person.
   b) Catalogs, etc., are available for users to study and use.
   c) Routing slips are used to circulate information and secure the return to the procurement office.
   d) A sample room or area is maintained for users.
   e) In-service training and instruction about new materials and new uses is conducted from time to time.

Procurement Procedures

Requisition Procedures

1. Uniform requisition forms and procedures have been established.
   a) for purchases
   b) for services
   c) for warehouse items
      1) A pre-printed standard list is used.
2. A definite time schedule for receiving requisitions has been set up.
3. Requisition procedures are known to all concerned.
4. The supply clerk or warehouse manager requisitions standard warehouse items.
   a) Minimum-maximum inventories have been set up.
   b) A reorder point has been established for each standard warehouse item.

Purchase Order Procedures

1. Purchase orders are on a standard form.
2. Purchase orders are numbered consecutively throughout the year and coded with the year.
3. A uniform number of copies of each purchase order is made.
4. A schedule or calendar of purchasing dates is set up.
   a) Sufficient "lead time" is set up for each kind of material.
   b) Contract or "blanket order" buying with periodic delivery for standard items has been set up.
5. Standard package lots are purchased wherever possible.
6. A "certification of quality" or "affidavit" is a part of every purchase order and contract.
7. All materials are purchased F.O.B. destination.
8. Procedures have been set up to assure accuracy and speed in the preparation of purchase orders.
   a) Work is specialized and assigned to definite workers.
   b) Machines are used wherever practical.
9. Procedures have been set up for duplicating and transmitting specifications.
10. Salesmen are seen whenever they stop by.

General Procedures

1. Procedures have been set up for receiving goods.
   a) A definite place for receiving has been set up.
   b) A uniform receiving report has been established.
   c) A uniform damage report has been established.
   d) Tools for unpacking are available.
   e) Material handling equipment is available.
2. Procedures have been set up for receiving and handling samples.
3. Procedures have been set up for evaluating and testing samples.
4. Procedures have been set up for packing and returning samples.

Inspection and Tests of Quality

Inspection

1. All materials are subject to visual inspection at time of receipt for quantity and condition.
2. Inspection for damage is continued as materials are unpacked and stored.
3. Deliveries are compared with samples previously received.
4. Periodic inspection of stored materials is made.
5. A damage or inspection report has been developed.

Tests

1. Tests are made, either of samples or trial orders, before material is placed on the "approved list" or purchased in large quantities.
2. Testing of new products and/or substitutes is carried on to determine suitability.
3. The method of testing is made clear to the vendor as part of the specifications.
4. Specifications are written in such a way that tests can be made to check the quality of goods received.
5. Tests are made immediately upon receipt.
6. Simple testing equipment, such as scales, gauges, magnifying glass, micrometers, magnets, files, microscope, paper bursting tester, and common chemicals for testing, are owned and used.
7. More elaborate testing equipment, such as paper thickness gauge, drying time recorder, duplex film applicator, paint fineness gauge, rubber hardness tester, portable hardness tester, and oil testing kit, is owned and used.
8. School laboratories are used for testing materials.
9. Commercial testing laboratories are hired to make tests if the school system cannot do so.
10. Users report back to the procurement office on the quality of products after using them.
11. Testing is a continuous process even though buying from the same suppliers.
12. Materials received are tested even though a sample was tested before purchase.
13. Procedures for testing, that is, number of samples, kinds of tests, etc., has been established.
14. Materials not up to specifications or "standards" ordered are returned to the vendor immediately.
15. The budget provides the necessary funds to carry on a testing program.
16. A definite testing program has been established.
17. A ratio of testing cost to purchase price has been established to prevent excessive testing cost.
18. Definite responsibility for inspection and approval of material has been fixed.
19. A program of practical, performance, physical, and chemical tests have been developed.

Storage, Issue, and Control of Supplies and Equipment

Storage

1. A system of centralized storage for both custodial and instruction supplies has been set up.
2. A system of storage which protects materials from theft, damage, and deterioration has been set up.
3. Materials are protected by insurance while in storage.
4. Materials are stored according to a definite plan.
5. Adequate storage space, including bins and shelves, is available.
6. The warehouse is divided into sections, bins and shelves, which are labeled.
7. A diagram of the warehouse, showing material location, is posted at various places in the warehouse.
8. Responsibility for control of storage and issue of materials is definitely fixed.
9. Perpetual inventory records are kept of materials in the warehouse and/or storeroom.
10. A physical check of materials in storage is made once a year to verify the perpetual inventory records.
11. A catalog of standard warehouse items has been developed.
12. A copy of the coded catalog is available for all users.
13. The stores or supply clerk is bonded.

Issue

1. Materials are distributed to users on a definite time schedule.
2. Materials are issued on written, approved requisitions only.
3. A record of distribution is maintained in the storeroom and warehouse.
4. Delivery slips are filed in the warehouse office.
5. Materials are distributed from the warehouse by school owned equipment and school personnel.
6. Issue of materials in standard packaged lots is made whenever possible.
7. Used tools and equipment are turned in to the warehouse when requesting issue of new materials.

Control

1. Limitations on the amount of materials are set up per teacher or per pupil.
2. The principal controls the materials and keeps within the budgeted amount for his school.
3. Principals are allowed to exceed their budget for materials in an emergency only on approval.
4. A record of "emergency" requisitions and orders is kept.
5. Instruction in the use of materials is given to cut down on waste, and to increase proper utilization.
6. A system that verifies the receipt of the proper amount, as ordered, is in operation.
7. The purchasing office verifies the price and extensions on all invoices before payment is made.
8. The purchasing office approves all invoices for payment.
9. A system of prompt payment of all invoices is in operation. (A tickler file has been set up.)
10. Discounts are taken by the school system.
11. A system of internal control to prevent over-payment or unauthorized payment is in operation.
12. An internal audit system is in operation.
13. Financial records are audited yearly by an outside agency.
14. Checks are counter-signed and written in such a way that they cannot be "raised."
15. Complete inventory and accounting records are kept for effective control.
16. A physical inventory of materials is taken at least annually.
17. All requisitions are approved by the encumbrance clerk or budgetary control before the purchase order is written.
18. A record of outstanding orders and back orders is kept.
19. All purchase orders conform to the legal requirements:
    a) as to form
    b) as to procedure in advertising or soliciting bids
    c) as to acceptance. ■

Using Stainless Steel in Schools

RICHARD E. PARET

Steel companies are developing more and more uses for stainless steel in schools. This article lists just a few of the many uses of stainless steel in school building today.

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Many school architects recognize the advantages of stainless steel and would like to use it more frequently in school construction. But in specifying it, they meet one of two blocks. First, many school boards remember the days when the cost of stainless steel construction was prohibitive. This is no longer true. Improved techniques have lowered the cost of stainless products to a competitive level.

The second block is more prevalent. It holds that any difference in cost, however slight, is the deciding factor in specifications. Reports one architect, "Many school boards are primarily concerned with unit cost and how it can be cut. This is understandable and commendable. But the danger is that they may grasp immediate savings at the sacrifice of much greater future economies."

Considerations of unit cost are complex. No comparison of material costs is realistic if it stops with initial outlay. The total school bill to the taxpayers includes insurance, maintenance, custodial care, replacement, and other long-term items. Of these the highest is probably maintenance, which can add as much as 25 per cent to yearly operating costs.

Corrosion-resisting stainless steel requires less maintenance than other customary building materials, and appreciably reduces upkeep cost of a school plant. Stainless steel's durability reduces replacement costs; its easy cleaning properties cut maintenance time and expense; its appearance is always handsome.

What exactly is stainless steel? Stainless steel is an iron-base alloy that must contain at least 11.5 per cent chromium. It often includes nickel, manganese, and other elements. There are nearly 40 different types of stainless steel, each one suited for a particular job. Only three or four need be considered in the architectural field. Stainless steel has no coating or finish, it is stainless all the way through.

Of course, like any other building material, stainless steel should not be recommended haphazardly. In the following areas, its properties are particularly applicable:

Food Service Equipment: Stainless steel is becoming practically standard in school kitchens, cafeterias, and home economics rooms. Wherever food is prepared or consumed, sanitation is of utmost importance, and stainless steel supports cleanliness. Almost all kitchen equipment is built of stainless steel or has many stainless parts. Included are work tables, dish washers, milk dispensers, food receptacles, steam tables, cafeteria counters, and refrigerators.

Versatile Curtain Walls: The Educational Facilities Laboratories, Inc., has given school boards this advice: "We're in a period of rapid cultural change; don't saddle us with unchangeable schools." To meet this demand many schools feature curtain wall construction with standard modular units which can be demounted in future years and used in another location. Stainless steel is extensively employed on office buildings for framing, mullions, and panels of curtain wall systems. These features are important in school construction, too.

At Wayne High School in Wayne, N. J., stainless steel panels were brought into corridors to fill the wall

This stainless steel sink, bubbler and bubbler bowl are made with polished seamless welded tops to insure easy cleaning.

space between student lockers and the ceiling. This hard-to-reach area is now attractive and requires very little maintenance.

Roof maintenance will never be a problem on the Mifflin Township, Pennsylvania, School because it is covered with stainless steel sheet panels. Stainless metal was also used for gutters and downspouts.

Pre-fabricated panels are now available which cut costs even more. At Idlewild Airport in Queens, N. Y., architects designed a four-foot curtain wall module for the apron side of the 2300-foot long International Arrival Building. Filler panels for modules range from spandrel glass, louvers, and windows, to doors or combined units. The panels are framed with stainless steel and are interchangeable, permitting easy expansion in years ahead. A similar system can be employed to build a school that can grow.

Flashing: Stainless steel flashing for spandrel beams, roofs, parapets, and exterior columns is often specified by architects even when the facade is of another metal because stainless is compatible with all building materials. It eliminates the problem of galvanic action and corrosion which results in unsightly stains. According to an architectural metal fabricator, stainless is the only flashing material that can be soldered in light gages. With on-the-job soldering, mechanical joints are eliminated, and a continuous run of flashing securely weatherproofs the building.

Doors and Entrances: Entrances are a perennial problem for school maintenance staffs. Here traffic is always heavy, doors are banged open and shut hundreds of times a day. These same problems — are faced by New York City in its housing projects. In one schoolhouse now being built, architects feel they have eliminated wear and deliberate marring at entrances. They have placed panels of textured stainless steel on all doors — and alongside the doors around corridor and vestibule windows.

There are other locations where texturing combined with the properties of stainless steel provides an improved design. Cafeterial front and side aprons have been sheathed with textured stainless steel. Colored stainless steel, another recent development, enables architects to vary design effects.

These factory-made, stainless steel laboratory sinks and work tops stand up to chemicals, cleaning procedures and physical abuse in schools.

One of the newer weapons against hard wear is textured stainless steel which is more rigid and practically impossible to mark.

Door hardware, including push-plates, kick-plates and panic bars, are also made in standard designs. They keep their attractiveness for the life of the door and require very little maintenance.

Windows: Stainless steel window frames and sash are available from many manufacturers. Since stainless is not affected by corrosion, it will not deteriorate and be difficult to operate. Varied types of stainless steel-framed windows are on the market, including vertically and horizontally-pivoted models, double-hung, projection-type, folding and casement windows. Many can be combined with curtain wall panels and be prefabricated in the plant.

Showers and Lavatories: Another heavy-traffic area where stainless cuts maintenance costs is in lavatories and shower rooms. Stainless sinks and drinking fountains retain their sanitary look with only occasional cleanings. They cannot chip and are very difficult to dent. Stainless steel shower partitions and spray units have also been designed along standard lines to aid economy.

Laboratory Equipment: Benches, table tops, and other laboratory equipment often receive a good deal of abuse and are logical locations for stainless steel protection since it is corrosion-resistant and stands up to most common chemicals.

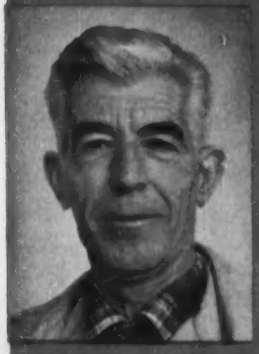
Miscellaneous Items: Slop sinks used by janitors receive considerable pounding and are now frequently specified in stainless. Swimming pools with stainless steel ladders, diving stands, drains, and fixtures will give unlimited service. Overhead gates and doors in corridors to close-off a section of a school at night or certain times of the day and rolling doors to shutter cafeteria counters are often made of stainless steel. Expansion joints of stainless steel are commonly specified by architects because of their durability, close production tolerances, and controlled expansion characteristics.

In the long run, economy in school building is better achieved by encouraging experimentation and diversity on the part of the architect, rather than by stinting on materials. As school design advances, the versatility of a modern material such as stainless steel will be called for more frequently. Steel producers, as well as steel fabricators, are working constantly to provide stainless steel products at lower costs. ■

Thar's Gold in Them Thar Schools

PATRICK O. WELCH

A man who has been in the construction business for many years gives Journal *readers the benefit of his school building experience.*



Mr. Welch has been active in construction for almost 40 years, his most recent work being in school construction.

Today, we are about a billion dollars short in our school expansion program. Next year, and each year following for the next decade, additional classrooms will be required for another million pupils — a million more each year. A lot of money will be required to build these new schools and classrooms which are needed to cover our present shortage and to house the added students.

The money we must have for this program will come from taxes — federal, state, and local — and the cost will be added to budgets already out of balance and put on tax rolls that are already overloaded. A lot of these taxes will be paid by people who cannot afford to pay them — and yet, who feel they cannot afford *not* to pay them. Many taxpayers will cut new notches in their belts before our school expansion program is completed.

The money raised by new taxes to cover the cost of new schools will be disbursed by school boards — school boards made up of farmers, attorneys, storekeepers, garage mechanics, and other people of practically every economic circumstance to be found in any cross section of this country. Except that they consist, generally, of men and women who are willing to sacrifice their time and efforts to the welfare of their community, they are average Americans — just average and ordinary Americans.

The average and ordinary American may be either a dreamer or a very practical person — trusting, gullible and complacent or suspicious, skeptical, and belligerent. They may be penurious and tight fisted, or squandering and wasteful of the taxpayers' money and their own. as well. One thing, for certain, if they are average citizens, they will not have had enough experience with construction programs to properly protect themselves and their constituents should they be unfortunate enough to fall into the hands of an incompetent architect or an unscrupulous set of contractors.

There are foundations today that are set up to assist in the programming and building of hospitals. They are, to some degree, philanthropic institutions and advisory organizations, yet their managers are practical enough to have rigid rules and regulations to govern the duties and obligations of both the architect and the contractor. It can be regretted that there is no such advisory assistance available upon which school boards may lean.

Construction Work Not Standardized

Fortunately, many architects attempt to look after the welfare and interests of their school board clients, and most contractors expect to produce a substantial school building as the fulfillment of their contracts. The degree of the attempt and the result of these expectations depends largely on circumstances.

No one has ever been able to tie down and systematize construction work as our manufacturing and production activities have been systematized. There can be no rigid and standard procedure since there is no production, and each contractor's activities must rely on the endeavors and initiative of individuals. What system of procedure there may be will result from the personal efforts of the experienced men on each job. With enough experience and intelligence, the work will proceed with little dissension or confusion and the problems and difficulties, as they come up, will be settled and overcome with relatively little annoyance and with minimum expense to the owners. To a great extent the experienced and capable contractor will anticipate and solve a lot of the problems before they arise.

But there are competent and incompetent architects and both honest and unscrupulous contractors. Considering the billions of dollars that will be spent in the next ten years on school expansion it is unfortunate that we have no advisory boards on school construction. The average school board must depend on what meager information it can gather pertaining to the architects being considered and it is sometimes not enough. The fast talking salesman who has found the architectural business a profitable one is often much more plausible to the inexperienced school board than the man who has devoted his life to developing an efficient architectural organization.

Consider for a moment how the competent and reliable architect can be expected to operate. He has numerous jobs behind him that speak well of his efficiency, and he has many friends among the clients for whom he has worked. Generally, new jobs come to him without too much solicitation. If he resorts to salesmanship at all, it is mainly to retain contacts with those who know and respect his ability and who may be influential enough to help divert new business into his office. He does not sell architectural services as vacuum cleaners and household brushes are sold. Nor does he try to get his foot in the door as his less retiring and less reliable contemporary is likely to do. He does nothing to support the facetious remark so often made among architects themselves that success in their profession depends on 2 per cent ability and 98 per cent salesmanship.

The ambitious, unethical, and aggressive architect will not be so reticent. But he will be plausible. If he is clever, he does not sell architectural services

as vacuum cleaners are sold. But he will attempt to sell them. And the most frustrating fact of all is that he may be the better architect of the two. Ambition and refusal to conform to practices does not necessarily brand a man as incompetent. It only proves that there can be no rigid standards by which an architect can be measured. There can be no manual of rules by which an architect can be judged. But there are precautions that can be taken and values that can be carefully considered before the board makes it's final selection of the man who will design and supervise its building.

Selecting the Contractors

Let us regard the method by which the contractor is usually chosen since it does so little to alleviate the troubles and worries of a school board. Generally, the contract is awarded to the lowest bidder of a selected group of contractors and since, very often, the firm that does the cheapest work can afford to quote the lowest price there is always a strong possibility that the contract may be awarded to the least reliable of the group. If the list of bidders is made up entirely of reputable contractors, it can hardly be anticipated which one will submit the acceptable bid. Nor does it matter. It is when contractors of questionable ability are given plans to figure because of friendship, or because neither the architect nor the board has the courage to refuse their request, that odds begin predicting a troublesome job.

There is often a feeling among school boards, and also in certain architect's offices, that the larger the list of bidders the more chance there will be of receiving a low bid. And this is true — up to a certain extent. But contractors are not fools and they analyze their chances of successfully bidding on a job very carefully before they spend the time and money required to figure it. If the list of competitors is too large or if it contains too many mavericks of the trade, they often return the set of drawings, expressing regret that unexpected pressures prevent them from preparing a quotation. Sometimes, instead, they actually submit a quotation — a complimentary bid — using a price that is given to them by a competitor. They do this only because they do not wish to take a chance of offending the architect by returning his plans unfigured. Very often the two or three high bids that are submitted on a building are of a complimentary nature, and the competition is not as great as a school board member believes it to have been. This practice may be a little unsound, a little unethical, a little unreasonable, but it is not unusual by any means.

Probably the only method the members of a school board can use to protect themselves against the chance of selecting the wrong architect is to exhaust every means open to investigation before making their decision. It entails a lot of work and may cost a little money, but it is worth it. Their protection against the possibility of getting an incompetent or dishonest contractor is in keeping all such firms off the list of bidders. These are both sensible and essential precautions but many school boards will have to have that fact proven to them, and probably proven in the hard way.

Architect Wears Many Hats

The average school board making a selection of its first architect will be apt to consider him only as the designer of the building. They are inclined to be impressed if he can show them buildings he has already designed that have imposing elevations and pleasant and pleasing interiors. And, of course, ability in this field is one of the prime requirements of any designer and any architect.

But the architect is a man who will wear many hats. He is expected to have ability in many fields. An aptitude for designing an impressive looking building is almost essential, but it is not enough in itself. There are the questions of economy, of supervision, of authority, and of his concern for the interests of his clients. Thirty-five years ago the architect was the imposing figure in construction work. He controlled the jobs. Though his prime interest might have been artistry in design, he nevertheless concerned himself with the supervision of the work and with the ability of those who did it. Generally, he had enough practical experience in construction to know what could be done with materials, to recognize good workmanship, and to understand the advantages of accepted building practices. Not too many architects of today have had that experience.

The architectural profession has lost much of the eminence it once had, and it has relinquished the authority it once exercised over the building contractors; at least, a good portion of it. A new style of design is being developed — that is generally referred to as contemporary architecture — and it is in too embryo a state to have established recognized standards. Yet the old standards, for the most part, have been discarded. The old orthodoxy is gone and the new is not yet born.

Non-Conformist vs. Average Good Architect

The occupation of architecture seems at times to have much in common with that of radio where for years the most prominent character was a wooden dummy. There have been a number of Charlie McCarthys in the profession of architecture, too. Deceit and duplicity have been palmed off with clever obtrusion for ability and craftsmanship, and it is often impossible to positively identify one from the other. Frank Lloyd Wright practiced his trade for 70 years and was proclaimed many times to be the greatest architect ever produced in America, yet his most precious examples of Wrightism are being ridiculed now that his salesmanship is no longer here to promote them. Only history can settle the controversial question of Wright's ability. And only history can attest to the ability or hypocrisy of others who have achieved fame by deserting the standard and accepted practices of their profession. We probably need insurgents and non-conformists, but it could be well for the average school board serving an average community to select an average good architect.

There are other characteristics common to certain architects which also might well be avoided. An unhealthy ambition for wealth can be one of these for there are always ways by which an architect can benefit in some 'round the mulberry bush manner by doing favors for an unscrupulous contractor. He can need a new heating system in his house or a sun porch built on the west wing, or many other things which ordinarily cost money. The profession could regain some of its lost eminence if this didn't happen as often as it does.

Lack of courage to admit his own mistakes and his own weaknesses is another fault which can make an architect very undesirable. It is not nearly as uncommon as it should be for an architect to expect the contractor to cover up any mistake which has been made in the drawings or specifications and which threatens to become embarrassing to the architect. And a contractor will often do it in order to gain favor. But somehow the obligations which result must be paid off, and it is usually done by the architect when he shuts his eyes to sloppy workmanship or approves padded extras and mispriced credits. In all these cases it is the owner who pays the bill.

There can be no manual to refer to and no set of rules to follow in selecting an architect for a school program. An ability for designing and the practical experience necessary to recognize good workmanship from bad are essentials. But honesty and courage are even more important. I recall a remark made at an architectural convention that there were three requirements by which to judge an architect; *integrity, integrity,* and *integrity.* It could be as good a rule as any for a school board to follow. ■

Alternatives to The Kennedy Plan

ELAINE EXTON

Since President Kennedy's general federal aid-to-public-schools program[1] has become increasingly controversial and faces formidable obstacles in Congress, a number of alternate plans are expected to be pushed vigorously during committee deliberations and in the House and Senate debates.

These may be offered as amendments in the form of substitutes for the administration-backed measure (S. 1021 and H.R. 4970), or as modifications which may influence the scope and nature of whatever legislation may eventually emerge. As a member of the House of Representatives wrote: "I say '*may*' advisedly, because many of my colleagues have the opinion that no legislation will result because of the numerous cross-currents produced by it." Some of the major approaches which may be considered in the school-aid debates are outlined below.

Federal Teachers' Pay Unlikely

The change most likely to be effected in the Kennedy proposal is the deletion of general federal aid for teachers' salaries from the measure in the House.

Reiterating his opposition to this provision at a recent press conference, the Hon. Sam Rayburn (D., Texas), now serving for the seventeenth year as the House Speaker, disclosed: "My decision for a long time has been for federal aid for school construction and not for payment of teachers' salaries. But it is up to Congress, and I wouldn't resist bringing up a bill of that kind."

Testifying before the House Subcommittee on General Education, Arthur S. Flemming, the last Secretary of Health, Education, and Welfare in the Eisenhower cabinet said: "I do not concur, however, in the recommendation (placed before you by President Kennedy and Secretary Ribicoff) that the grants should be available for use by the states for both school construction and teachers' salaries. Rather I believe that the federal funds should be earmarked for servicing debts already incurred for school construction, for servicing debts that may be incurred for new construction, and for the construction of new buildings on a pay-as-you-go basis."

Among the reasons he gave for backing such a solution were that "it would release funds for urgent increases in teachers' pay by taking up a substantial share of the heavy burden of construction costs (and) attract the support of those citizens who are genuinely fearful of the Federal Government making grants that become a part of current operating budgets at the local school district level."

School Construction Only

Everett M. Dirksen (R., Ill.), the Senate Minority Leader, has told reporters he would press for passage of his own bill — S. 433 — which is limited to the construction of classrooms in public schools only. Its 4-year, $1 billion dollar authorization ($250 million annually) would provide federal matching funds "on the basis of needs, with no frills of any kind."

The aid would be allocated among the states according to the ratio the number of children under 14 years in a state bears to the total number of children under age 14 in the United States. "It is my thesis that the states and local communities have the primary responsibility for education," Senator Dirksen explained, commenting: "it is not the intent of this bill to shift that responsibility to the Federal Government."

Several Democrats have also brought in bills focused on school construction. Representative Thaddeus M. Machrowicz and Louis C. Rabaut (both D's, Mich.), for example, are the sponsors of identical measures (H.R. 260 and H.R. 2513 respectively) patterned on the original version of S. 8 as introduced last year by Senator Pat McNamara (D., Mich.) and as reported by the Senate Education Committee. Their aim is an emergency 2-year program of construction grants costing $2 billion ($1 billion a year) to be allocated among the states on a formula which relates state school population (5 to 17 years) to state income. The funds would be matched by the states.

Using a different approach, another Michigan Congressman, John Lesinski, has introduced a bill — H.R. 243 — to provide up to $3 billion in federal loans to state and local education agencies for public school construction at an interest rate of 1 per cent per annum over a period not to exceed 30 years. Only local jurisdictions whose outstanding debt exceeds 50 per cent of their legal debt limits would be eligible for the federal loans which would be allocated among the states in proportion to their school-age population.

Bills to include private schools in construction aid have been offered by Representatives Clement J. Zablocki (D., Milwaukee, Wis.) and Thomas L. Ashley (D., Waterville, Ohio). Although both are modeled on H.R. 10128 as originally introduced by Congressman Frank Thompson, Jr. (D., N. J.) in the 86th Congress they use different routes to this goal.

The Zablocki measure — H.R. 278 — would authorize an expenditure of $975 million during three fiscal years ($325 million a year). Of this sum 15 per cent would be available for loans to private, nonprofit schools and the remainder would be distributed among the states for grants for public school construction.

On the other hand, H.R. 2201 of Representative Ashley would provide for loans totalling $195 million over a 4-year period ($48,750,000 a year) to private, nonprofit schools to be allocated among the states in proportion to private school enrollment and $1.3 billion in grants over 4 years ($325 million a year) for the construction of public schools to be allocated among the states in proportion to school-age population.

Broad-Scale Federal Support

Other bills, however, besides S. 1021 and H.R. 4970 embodying the President's public school aid program have been placed in the Congressional hoppers which would authorize the use of federal money for teachers' pay as well as for building classrooms.

Senators Pat McNamara and Philip Hart (both D's of Mich.) have re-introduced under the same bill number, the legislation — S. 8 — which passed the Senate with amendments by a vote of 51 to 34 on February 4, 1960. This would furnish an estimated $1.9 billion in federal grants to the states over a 2-year period (roughly $950,000,000 annually) to be used either for construction or salaries or for a combination of both, as each state determines. Increased state effort would be required.

The money would be allocated according to an equalization formula which would afford grants ranging from about $10 per school-age child (5 to 17 years inclusive) in the highest income states to about $30 per school-age child in the lowest income states; the average across the nation being about $20 per child.

A bill based on S. 8 — H.R. 1066 — by Rep. Carl D. Perkins (D., Ky.) calls for raising the average grants per school-

[1] For a description see "President Kennedy's Program of General Federal Aid for Public Schools" in the April, 1961, issue of the AMERICAN SCHOOL BOARD JOURNAL, pp. 36, 37, and 40.

age child to $25, bringing the total cost of the program to roughly $2.4 billion over a 2-year period ($1.2 billion annually). A companion measure to S. 8 — H.R. 667 — has the backing of Congressman Jacob H. Gilbert (D., N. Y.) in the House.

Congressman Roland Libonati (D., Ill.) is the sponsor of legislation — H.R. 253 — similar to the Murray-Metcalf "massive" school support bills of the 86th Congress (H.R. 22 and S. 2) originally promoted by the National Education Association. It authorizes a permanent subsidy totaling about $1.1 billion in the first year and rising to more than $4.8 billion annually in the fourth and following years.

H.R. 253 would make available $25 per child of school age in each state during the first year of operation, $50 the second year, $75 the third year, and $100 for the fourth year and for each fiscal year thereafter. The federal grants would be allocated among the states on the basis of school-age population. The states could decide how they would apportion the federal money between teacher's salaries and school construction. No state or local matching would be required.

Still another approach to providing federal money for teachers' salaries and school construction is presented in S. 723 co-sponsored by Sen. John Sherman Cooper (R., Ky.) and Senators Javits (R., N. Y.), Aiken (R., Vt.), Fulbright (D., Ark.), Anderson (D., N. Mex.), Kuchel (R., Calif.), Fong (R., Hawaii), and Wiley (R., Wis.).

Based on the principles employed by the late Senator Taft in his bill which passed the Senate in 1948, S. 723 would assist the states in financing a minimum foundation program of public elementary and secondary school education through federal allotments of $20 per public school child, with larger amounts to those states which, after making a maximum reasonable effort to provide support for schools, would still be unable to guarantee a minimum educational program.

As explained by Senator Cooper: "The bill first establishes a national goal of basic public school education. It sets $400 per child, the present national average, as the level of education to be made available to the children in every state by 1965. Second, it measures each state's capacity to meet basic education needs — in terms of the state's total income. Finally, it defines the federal responsibility toward raising the standards of needy states and poor school districts to the minimum level required by the national interest."

Four per cent of the total personal income of each state — the best effort now made by any state — would be taken as a measure of the state's capacity to meet basic education running costs. The federal share in the minimum foundation for low-income states would be one-half the amount by which $400 per child exceeds 4 percent of state income. States having income sufficient to cover the $400 basic cost would receive the $20-per-child flat grants, to be applied first in their neediest districts. The plan is expected to cost 700 million federal dollars the first year, rising to $1 billion in the fourth year.

The Civil Rights Problem

Whether or not Congressman Adam Clayton Powell, Jr. (D., Harlem, N. Y.), the new chairman of the House Education and Labor Committee, again offers his controversial amendment to withhold federal aid from segregated schools, this issue seems certain to be a center for debate when the administration's public school measure reaches the House floor. In fact it is already present in legislation introduced in the 87th Congress.

Bills to facilitate integration range from measures like H.R. 668 of Rep. Jacob Gilbert (D., N. Y.) which would withhold federal aid from schools which discriminate between students by reason of their race, color, religion, ancestry, or national origin to H.R. 2027 of Congressman Seymour Halpern (R., N. Y.) and S. 484 of Sen. Kenneth B. Keating (R., N. Y.) and 9 others which would provide technical and financial assistance to school districts attempting to desegregate.

Most of the omnibus civil rights bills, such as H.R. 547 of Rep. Adam Clayton Powell, H.R. 101 of Rep. John Dingell (D., Mich.), and S. 1434 of Sen. Paul Douglas (D., Ill.) and others, have a provision authorizing the Attorney General of the United States to bring civil actions to prevent a denial of civil rights, including desegregation in schools.

Or such action concerning desegregation situations may be the subject of a separate measure as in the case of S. 445 co-sponsored by Senators John Sherman Cooper (R., Ky.) and Jacob K. Javits (R., N. Y.) which, in Senator Cooper's words, "would give the Attorney General the power to intervene in school desegregation cases, making the United States a party to such suits and bearing the cost of court cases to enforce the equal rights guaranteed by the 14th Amendment." Both these Senators, however, have voiced their hope that a Powell-type amendment will not be attached to any aid-to-education bill, since such a maneuver would "very likely" interfere with its passage.

In the "Word from Washington" column in the May AMERICAN SCHOOL BOARD JOURNAL, there is an error in quoting Mr. Freeman's testimony before the House General Subcommittee on Education. The sentence which reads, "None of the tens of thousands of state and local boards of education has appeared to testify against it (federal aid to education)" should read, "None of the tens of thousands of state and local boards of education has appeared to testify *on behalf of federal school aid for at least the past five years, but some have testified* against it." (Italics ours)

On the other hand, Clarence Mitchell, director of the Washington bureau of the National Association for the Advancement of Colored People, testified in appearances before House and Senate Education Subcommittees: "We respectfully urge that any bill or bills reported favorably for aid to primary and secondary schools and aid to defense impacted areas include an anti-segregation amendment."

Taking an opposite stand several Southern Congressmen have proposed an amendment to the Constitution of the United States reserving to the states exclusive control over public schools — for example, H. J. Res. 14 (Boggs, D., La.), H. J. Res. 18 (Poff, R., Va.), H. J. Res. 133 (Rains, D., Ala.), S. J. Res. 30 (Talmadge, D., Ga.), and 9 others. A few, like Rep. D. R. Matthews of Florida (H.R. 1192) have offered bills to prohibit the courts of the United States and all other federal agencies from deciding or considering any matter drawing in question the administration by the several states of their respective educational systems.

Private School Issue

Touchy as the civil rights issue continues to be, this time the question of whether private and parochial schools should receive federal aid seems to be stirring even sharper controversy.

Fearing that "if we try to intermingle into this bill (the administration's S. 1021) other issues that have no direct connection with the problem of public education, the end result may very likely be a failure on the part of the Congress to do anything in this field this session," Sen. Wayne Morse (D., Ore.) at hearings before the Senate Education Subcommittee he chairs, repeatedly stressed "the public school system of this country is entitled to have a federal aid to education bill for public schools unencumbered by any amendment involving private schools or any amendment involving civil rights."

Warning that he would "fight it out on that line, unless the President of the United States gives me contrary instructions" or that he would recommend there be "no bill" if any such amendments are added, Senator Morse contended that the "real need is to get the principle of federal aid to education on the statute books of this country and then proceed in independent legislation" to provide for loans to private schools and to see to it through amending the existing Civil Rights Law "that the educational program is carried out in accordance with the Constitutional rights of all citizens."

He expressed his willingness to support separate legislation in each of these areas and promised to hold "fair and full hearings (to make) every point of view a part of the record" on S. 1482 authorizing federal loans to private, nonprofit schools for construction which he has joined Sen. Joseph S. Clark (D., Pa.) and five other Senators in co-

(Continued on page 40)

the editorial stand

CHANGED HIGH SCHOOL UTILIZATION

THE Commission on the Experimental Study of the Utilization of the Staff in the Secondary School, sponsored by the National Association of Secondary School Principals, has recently released a report calling attention to the radical changes which are needed, and going on, in the secondary schools, and which are affecting not only the character of the curricula of the schools and the organization of classes, and consequently also the design of the school buildings.

The report calls attention to the fact that some classes in high schools necessarily will be smaller than present-day classes. However, the Commission rather reverses the recent demand for the uniform reduction of all classes, and proposes that as much as 40 per cent of the students' time be spent in classes containing as many as 100 to 300 students. This will require the discontinuance of the practice of making practically all classrooms in high schools similar if not equal in size, and will require the planning and construction of a variety of large rooms in which such teaching devices as audio-visual aids, language laboratory methods, and lectures can be held.

The Commission believes that more independent study should be encouraged in the future so that much of the students' time can be given to creative and independent work. It is the Commission's belief that 40 per cent of the students' time should be devoted to this independent work, which will necessitate more library and private study spaces, and consequently will entail radical changes in the plan of buildings.

The Commission believes that fewer professional teachers will be needed and there will be more adult aides, clerks, and instructional assistants, together with guidance and community consultants. This again will require special areas of work and special planning of the buildings.

The Commission concludes that the new types of organization will require far greater flexibility in school buildings and new forms of arrangement, classrooms, and additional facilities for automated instruction, TV broadcast reception, and library and private study areas.

The report means simply that the high school is in a period of transition and that the foreseen changes will require strong emphasis on educational planning of future buildings. Boards of education have not only here a real responsibility for insisting upon sound educational planning for all new schools; they also have an opportunity for modifying the older school plants in order to make them continue to be genuinely useful. Above all, this is not a time for wishful and wild experimentation; it is rather a time for wise attention to prospective changes in secondary education, and for the application of hard, common sense judgment to re-enforce the work of educational and in a minor way even replacing teachers.

TEACHING MACHINES

AMERICAN educators and inventors deserve considerable credit for developing teaching machines for the improvement of education. The devices have been shown to be valuable in supplementing to a surprising extent, and in a minor way even replacing, teachers.

While some educators have given enthusiastic welcome to the machines, some critics, like Dr. Kenneth Komoski of the Collegiate School, New York City, have expressed the opinion that machines are still too inflexible and cannot be readily adapted to a wide variety of the especial needs of local school programs. Both the electrically and manually operated devices develop a general concept of a subject and provide answers which the pupil must give correctly before he can proceed to study the next problem or topic.

Inquestionably, there is great potential value in the machines; This is particularly true of the subject areas in which direction question-and-answer and repetition are needed to learn the basic facts and skills. The machines require self-activity and close application of the student to the subject matter; they hold the interest of even indifferent children, and they provide challenges to bright youngsters to proceed at a quick rate. There can be no cheating and very little guesswork. However, in the language of Dr. Komoski, the machines are still immature and place undesirable restrictions on the teachers who desire to use them. This fault is being overcome through continued research and the education of so-called "programmers" — teachers who observe the successes and failures of the machines and who apply their experiences to adapting the content of the machine-taught lessons and to making adjustments that help the student utilize his own mistakes for better learning.

When the inventors of teaching machines have provided the devices with some flexibility and adaptability which are now found in textbooks and audio-visual instructional materials, the machines will unquestionably provide badly needed helps for elementary and secondary education. School authorities are quite rightfully adopting an inquiring, experimental attitude toward machines until more available experts can be developed to adjust them to local situations and teachers can utilize the learning of children in effective ways.

LOCAL STRENGTH ESSENTIAL

THE strength of our United States is reflected in the strength of our local communities, and we shall make educational progress in the State and in the nation as we make educational progress locally. We must distinguish between petty localism and the state-wide view which believes thoroughly in schools for democracy and democracy for schools. The problem as we face the future becomes more critical since the cost of schools will increase rather than decrease. — *Alonzo G. Grace.*

Wm. C. Bruce

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WASHINGTON

(*Continued from page 37*)

sponsoring (Bush, Dodd, Hart, Javits, and Thruston Morton).

In discussing this bill Senator Clark made plain that the legislation is being submitted because the enactment of a federal-aid-to-education public schools program "will be advanced if we can separate the church-state controversy from the President's program, by handling it in a separate measure."

Under the provisions of S. 1482 $350 million would be furnished to private schools in loans for construction over a 3-year period ($105 million the 1st year, $117 million the 2nd year, and $128 million in the third). As described by Senator Clark "this is the same amount of assistance per school child in private schools as is provided in the administration's bill for each public school child. The fundamental difference is that aid for private schools would be on a repayable (long-term, low-interest) loan basis, not a grant; and would be used for construction only, not teachers' salaries."

Senator Clark further stated that S. 1482 "provides alternate means for a prompt constitutional test of loans to sectarian schools. . . . The bill also stipulates that only private schools not practicing 'discrimination in entrance requirements on the basis of race or color' will be eligible for loans under the program proposed."

In an effort to "harmonize the divergent views between those advocating public and private assistance to education by the Federal Government," Rep. Herbert Zelenko (D., N. Y.) authored a bill (H.R. 6439) combining the Kennedy public-school-aid plan with provisions to extend and liberalize Title III of the National Defense Education Act of 1958.

Offered as a substitute for the administration bill, his measure would "retain the entire program proposed by the President for the public schools (and provide) for grants to private, nonprofit elementary and secondary schools in each state for the acquisition of equipment and *constructing school facilities* for use in teaching science, mathematics, and languages."

Returning Taxes to States

Still other legislation would channel to the states for educational purposes a certain percentage of federal income tax collections, or permit taxpayers to deduct state and local taxes for education from their federal income tax payments. Their Congressional sponsors viewed these methods as attractive routes for bypassing the private school issue and for avoiding any further build up of an educational bureaucracy in Washington thus "closing a door to federal control."

Measures which would return a portion of certain federally-collected taxes to the states for educational use include such variations as (1) Sen. Norris Cotton's proposal (S. 293) to appropriate annually to each state for educational purposes two cents of the federal tax on each package of cigarettes sold within the state (similar to H.R. 1740 of Rep. Frank T. Bow) and (2) Rep. Charles Goodell's plan (H.R. 5265) for relinquishing the 10 per cent federal telephone tax collected within the state's own borders to any state willing to enact legislation to use this tax source for education.

Through S. 1556 by Sen Francis Case (R., S. Dak.) the Federal Government would distribute to the states for elementary and secondary education on a per capita pupil basis one per cent of the money collected nationally by income taxes, corporate and personal. Some of the other bills which would return one per cent of the income tax collections to states for education are H.R. 46 by Representative Teague (D., Texas), H.R. 910 by Representative Berry (R., S. Dak.), and H.R. 3237 by Representative Bow (R., Ohio).

H.R. 1809 by Rep. Melvin Laird (R., Wis.) would return to the respective states for educational purposes a flat five per cent of the federal income taxes collected (personal and corporate) with-

(*Continued on page 42*)

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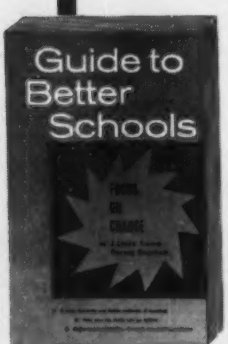

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WASHINGTON

(Continued from page 40)

in a state and authorize the Appropriations Committee to reduce the appropriations for grants to states for health, education, and welfare by the amount of the payments made to the states under his plan. S. 1119 by Sen. William Blakley (D., Texas) would authorize the remission of five per cent of the federal income taxes collected within the state to the state educational agency for use for educational purposes only.

Deductions and Tax Credits

Some legislators have been advocating federal income tax credits for a portion or all increases in state and local school taxes as an alternative to the federal grants-in-aid approach.

To stimulate state and local action to provide tax revenues for schools above and beyond the current effort, Congressman Richard Poff (R., Va.) reintroduced his bill (H.R. 530) to permit individual taxpayers a credit against their federal income taxes for new state and local taxes imposed for school purposes after the enactment of his measure.

In his appearances before Congressional Education Committees, Sen. Barry Goldwater (R., Ariz.) predicted that his own program (S. 991) would make all the alternative plans for federal aid-to-education "irrelevant and unnecessary." The Goldwater proposal would provide a federal income tax credit of up to $100 a year for every citizen who pays a school tax on his real property or as part of his real estate tax.

Some proposals would amend the existing federal income tax laws or modify present rulings of the Internal Revenue Service to allow special credits for educational giving. An example is H.R. 5673 by Rep. Carroll Kearns (R., Pa.), the ranking minority member of the House Education and Labor Committee, which through permitting an optional tax credit for contributions to education would extend to all taxpayers the tax deductions for philanthropy now allowed persons in the top income bracket. Such encouragement of private giving would, in Mr. Kearns' opinion, "correspondingly reduce the need for the huge tax appropriations called for in the $6 billion federal aid-to-education proposals of the Democratic administration by as much as two to three billion dollars."

Congressman Roman C. Pucinski (D., Ill.) wrote the Commissioner of Internal Revenue urging the service "to reverse Revenue Ruling 54–580 and by Administrative Order permit any and all contributions made to church-sponsored elementary and secondary schools to be deducted in computing net income for federal income tax purposes." He said this would clearly establish that church-operated schools are an extension of the church and thereby render the debate as to their entitlement to federal aid "a moot question."

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Allowances for Educational Expenses

A wide variety of bills — only a few of which there is space to describe here — would permit a taxpayer federal income tax credits or deductions for varying proportions of educational expenses incurred by himself, his spouse, and/or any of his dependents, or others, in attending an accredited institution of higher learning. The legislation may cover tuition only for example, or tuition, fees, and books in some cases, and include living expenses (board and/or lodging) and sometimes transportation in the case of other bills.

Most of these bills apply to students above the secondary level. Exceptions are H.R. 238 of Rep. Melvin Laird (R., Wis.) which would provide a 30 per cent credit against individual income tax "for amounts paid as tuition or fees to certain public and private institutions of higher education *and high schools*" and S. 792 of Sen. Kenneth B. Keating (R., N. Y.) which would allow a federal income tax deduction per dependent of up to $300 for tuition and fees paid to any recognized educational institution, including private schools, colleges, and professional and technical training institutions. However, persons who receive direct grants from states or communities under state laws designed to block school desegregation would not be eligible for tax relief under the bill.

A number of measures would give an additional federal income tax exemption to college students or their parents. These range from an additional $600 personal exemption to some larger figure, usually $1,200. Besides affording an additional $1,200 exemption for full-time college students or their parents, S. 1162 of Sen. William Blakley (D., Texas) would provide "an additional income-tax exemption of $400 for an individual who is a full-time high school student." ■

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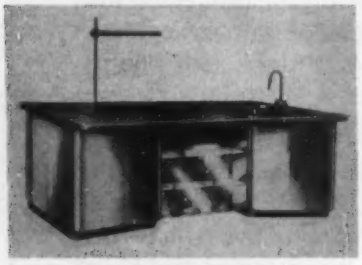
New Supplies

SCIENCE INSTRUCTOR'S DESK

Metalab Equipment Co., Hicksville, L. I., N. Y., has designed a new instructor's desk equipped with a green Colorcore top, that



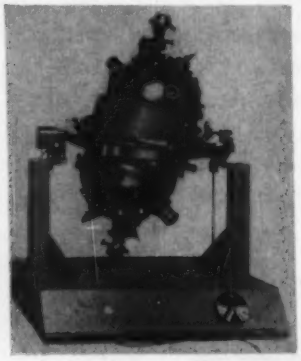
Chemical Resistant Top

is resistant to chemicals. An integral glass-enclosed display area permits students to clearly see demonstration materials presented by the instructor. The desk resists corrosion because of its stainless steel exterior. Write for complete details.

(For Further Details Circle Index Code 091)

PLANETARIUM PROJECTOR

A new small planetarium for high schools and junior colleges is offered by Astro-Dome, Inc., Canton 5, Ohio. This instrument optically projects the northern and southern skies in their true perspective.



For Use With Dome Screen

It can be used with dome screens 16 to 30 ft. in diameter. Diurnal motion as well as latitude change and procession can be demonstrated with remotely controlled motor drives on the projector. The instrument also projects planets, the moon, sun, and Milky Way, as well as 2500 stars visible to the naked eye.

(For Further Details Circle Index Code 092)

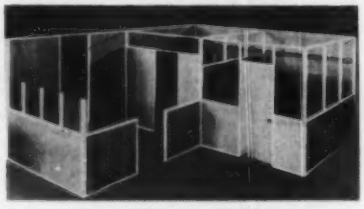
WOOD CARVING MEMORIALS

The American Seating Company, Grand Rapids, Mich., is offering wood carvings of six famous men of history for memorials that may be presented by the class of 1961. The carvings, in natural finished hardwood, are of George Washington, Thomas Jefferson, Abraham Lincoln, Franklin Roosevelt, Robert E. Lee, and Pope John XXIII. Each frame is mounted on an 18 by 27 in. frame ready for hanging in school. Each solid bronze plaque is inscribed "presented by the class of 1961." The company will also custom carve any other profile the class would like to present.

(For Further Details Circle Index Code 093)

PREFAB PARTITIONS

Commercial Easy Wall is a new partition system of prefinished components that can be easily and rapidly assembled to



Interlocking Components

economically subdivide interior space. Made by Simpson Timber Co., Seattle, Wash., the system offers many possibilities to schools, churches, and institutions. The 1⅝-in. panel is composed of a rigid core insulating board faced on both sides with prefinished hardboard. Panels come in 2 by 8-ft., or 2 by 10-ft. sizes, with matching doors. The prefinished vinyl wood grain surface is available in cherry mist, a silver gray, or cherry mocha, a dark brown. Send for full details on these seven interlocking components.

(For Further Details Circle Index Code 094)

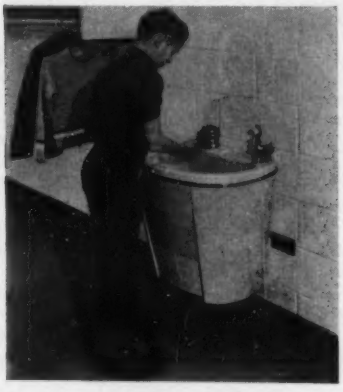
SELF-LOADING MOVING TRUCK

Vogel-Peterson Co. Elmhurst, Ill., has manufactured a new labor-saving truck for moving banquet tables. The Table-Hop allows one man to take from storage, set up, and position any number of tables, heavy stage sections, or choral and band risers, without extra help. No lifting is required. The heavy-guage steel truck wheels, rotates, pushes, or pulls about on two wide-tread, rubber casters. Write for additional information.

(For Further Details Circle Index Code 095)

DUO PLUMBING FIXTURE

Classroom installation of plumbing fixtures helps a teacher control students in the lower grades. Five Bradley Duos were



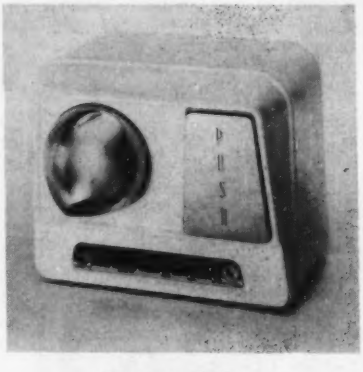
Includes Bubbler

recently installed in the rear of classrooms at the Goshen (Pa.) Elementary School, at heights of 31 and 27 in. for classroom and kindergarten, respectively. The fixture features foot control operation, automatically tempered water, and a bubbler for drinking. Two students can wash simultaneously at this fixture made by the Bradley Washfountain Co., Milwaukee, Wis.

(For Further Details Circle Index Code 096)

NEW STYLE HAND DRYERS

A new cover design highlights the new Sani-Dri automatic electric hand and hair dryers manufactured by the Chicago Hardware Foundry Co., North Chicago, Ill. The



Chrome Fittings

improved features include a newly designed, die-cast aluminum nozzle for more efficient air flow, and a trouble-free aluminum push-bar starter plate. Both features are finished in chrome. Send for the low prices on these hand and hair dryers.

(For Further Details Circle Index Code 097)

(Continued on page 46)

CORRESPONDING CODE INDEX NUMBERS TO BE ENCIRCLED CAN BE FOUND ON THE CARDS IN THE READER'S SERVICE SECTION

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New Supplies

(Continued from page 44)

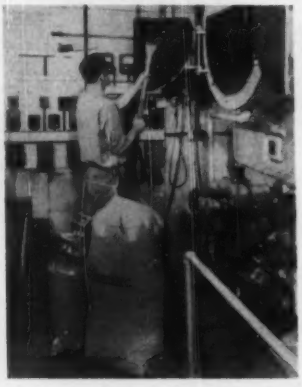
STEEL LAB FURNITURE

The Borroughs Mfg. Co., Kalamazoo, Mich., nationally known manufacturer of steel office cabinets and furniture, is now producing a line of heavy duty, quality steel laboratory furniture. Designed after intensive market study of requirements in industrial, educational and institutional laboratories, the line promises to meet the need for high quality, mass produced products at a modest cost. The company is a subsidiary of the American Metal Products Co., Detroit, Mich.

(For Further Details Circle Index Code 098)

BOILER CLEANING TOOLS

A heavy-duty vacuum with fire-resistant cloth filter has been developed by the American Floor Machine Co., Toledo 3, Ohio, to simplify the cleaning of boilers.



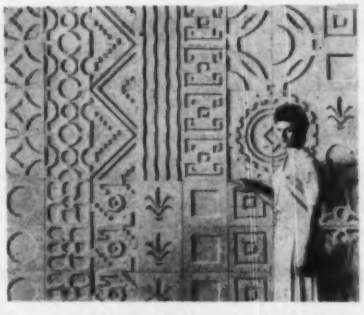
Simplifies Cleaning

The kit consists of paw tool for vacuum cleaning soot and scale from flat surfaces of the fire box; boiler tube expansion scraper cones, a 5-ft. wire brush, and 28-in. steel crevice tool with flat slot for suction opening. As the boiler or furnace is cleaned, all soot is automatically vacuumed directly into a factory-fitted, 55-gal. tank. Send for complete description.

(For Further Details Circle Index Code 099)

SCULPTURED WALL BLOCKS

Contemporary wall blocks, sculptured with deep-cut designs, offer acoustical wall elements in textured wood fiber Tectum.



Acoustical Fiber Board

Made by the Tectum Corp., Columbus 15, Ohio, the blocks feature both cameo and intaglio patterns. The 1-in. by 12-in. blocks come in a choice of colors and 15 standard designs to provide designer and decorator with new materials for accent walls of many types. The designs range from the simplest geometric forms, circles and squares to complex interlocking patterns. Write for specifications.

(For Further Details Circle Index Code 0100)

WOOD-BACK FLOOR BRUSH

The Flour City Brush Co., Minneapolis 4, Minn., has made a wood-back shower-feed brush for floor machines as an answer to the problem of metal-back brushes that are readily corroded by the use of detergents. The grooved brush back is made of quality hardwood plywood, impregnated with a special sealer to eliminate moisture absorption and warpage. Soap holes are patterned to allow perfect gravity feed of cleanser to the floor. Flo-Pac brushes are standardly furnished with Bassine fiber, but other bristling materials are available.

(For Further Details Circle Index Code 0101)

SHELF SUPPORT CLIPS

New Erectomatic shelf support clips will safely hold heavy loads. The clip-type shelving is made by the Columbia-Hallowell Division of the Standard Pressed Steel Co., Jenkintown, Pa. Hooked at the top, these positive-lock clips are easily hung in ¾ in. wide post slots spaced 1½ in. apart vertically. The one-piece clip has two prongs that fit snugly in the next slot below. Shelves can be placed as close as three inches. Beaded front posts allow shelves to be slipped in or out without tilting or disturbing their contents.

(For Further Details Circle Index Code 0102)

(Continued on page 48)

CORRESPONDING CODE INDEX NUMBERS TO BE ENCIRCLED CAN BE FOUND ON THE CARDS IN THE READER'S SERVICE SECTION

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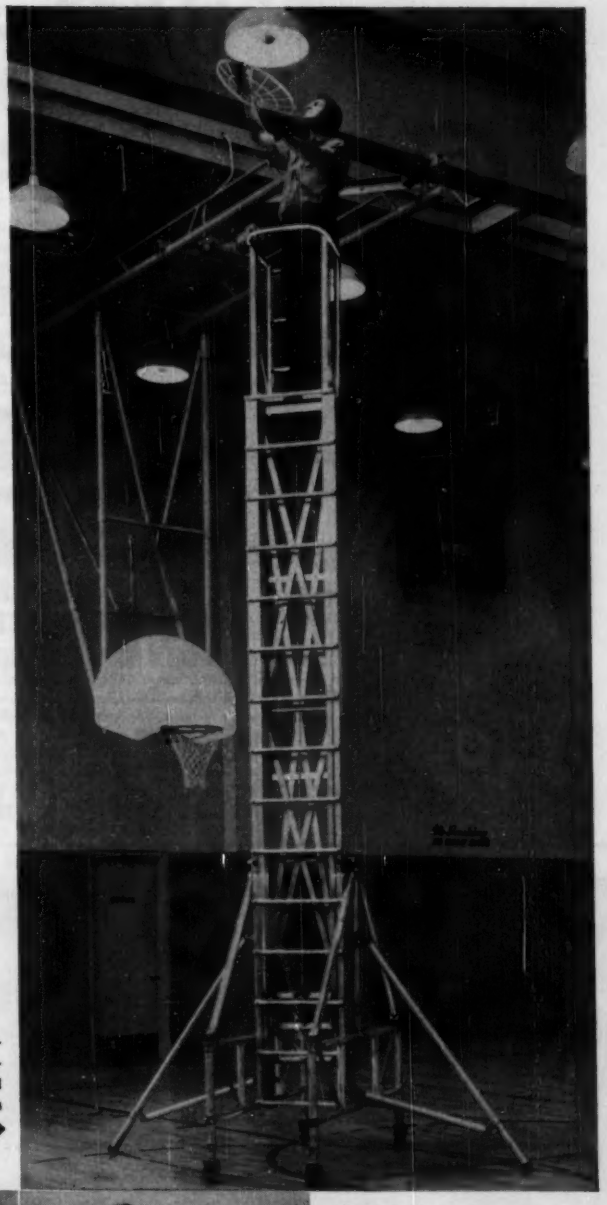

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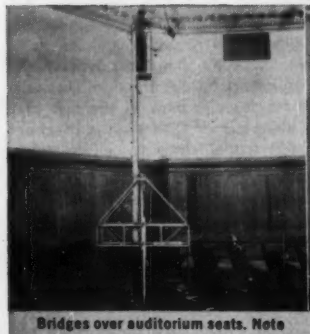

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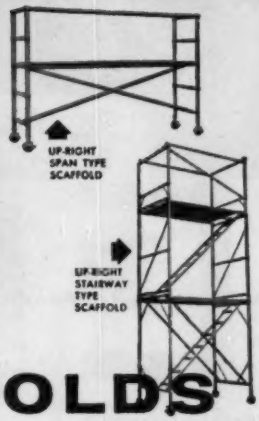

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New Supplies

(Concluded from page 46)

BASKETBALL BOARD

For outdoor training of basketball, the Collette Mfg. Co., Amsterdam, N. Y., has introduced a complete practice outfit consisting of a steel pole, all-weather Masonite backboard, goal and net. The official-size goal of ⅝ in. steel has arc-welded joints. The backboard is lacquered white on both sides. Write for details.

(For Further Details Circle Index Code 0103)

CATALOGS AND BOOKLETS

Unit Structures, Inc., Pestigo, Wis., has completed its 1961 Manual of Design for architects and engineers which contains technical data on the proper use of laminated wood structural members.

(For Further Details Circle Index Code 0104)

The **Maple Flooring Mfgrs. Assn.**, Chicago 1, Ill., is offering several free technical booklets, including official floor grading rules and guide specifications for floor installation procedure. Send for a list of technical literature.

(For Further Details Circle Index Code 0105)

A portfolio of school bus literature describes the complete 1961 line of school buses made by **Wayne Works Division**, Richmond, Ind. Send for a free copy.

(For Further Details Circle Index Code 0106)

Write for a free copy of "How to Use Direct-Wire TV as a Low-Cost Educational Tool" from **Argus Cameras, Inc.**, a subsidiary of Sylvania Electric Products, Inc., Ann Arbor, Mich.

(For Further Details Circle Index Code 0107)

The **Heller Co., Library Division**, Montpelier, Ohio, announces a brochure illustrating all sizes of library shelving and other equipment. Send for A.I.A. File No. 35-B.

(For Further Details Circle Index Code 0108)

"New Directions in Chalkboard," a 16-page brochure (A.I.A. File No. 35-B-1), shows how Colorlith chalkboard made by the **Johns-Manville Corp.**, New York 16, N. Y., can be used for partitions, easels, movable panels and convertible units.

(For Further Details Circle Index Code 0109)

"Arranging the Classroom for TV Viewing" is a brochure available from **Sylvania Lighting Products**, a division of Sylvania Electric Products Inc., Salem, Mass. Write for a copy.

(For Further Details Circle Index Code 0110)

A new selection of 26 patterns in decorative, rolled and wire glass is offered by **Libbey-Owens-Ford Glass Co.**, Toledo 3, Ohio. Send for a booklet showing the patterns in full scale.

(For Further Details Circle Index Code 0111)

A free copy of the 16-page 1961 Interior Fire Fighting Equipment catalog is offered by the **Fyr-Fyter Co.**, Dayton 1, Ohio. All lines of portable interior fire safety equipment are detailed for institutional users.

(For Further Details Circle Index Code 0112)

CORRESPONDING CODE INDEX NUMBERS TO BE ENCIRCLED CAN BE FOUND ON THE CARDS IN THE READER'S SERVICE SECTION

MANUFACTURER'S NEWS

Four talking postcards featuring Art Linkletter are being mailed to school superintendents and board members in a new promotion by **American Seating Co.** The recordings point out the need for well-designed furniture in view of the fact that a school child spends 15,000 hours in school from grade school through college years.

A complete line of flooring maintenance products specifically designed for use in commercial and institutional areas has been introduced by the **Armstrong Cork Co.**, Lancaster, Pa. Manufacturer's representatives and selected janitorial supply houses will distribute the new products.

Holcomb and Hoke Mfg. Co., Inc., Indianapolis 7, Ind., makers of Foldoor folding doors and partitions, has announced a greatly extended product warranty. Some parts are now warranted for the life of the original new installation; others for 10 years.

1900-1961
53 YEARS OF
LEADERSHIP
No. K-3 TABLE
TEMPERED MASONITE
PLASTICIZED TOP
EXTRA SAVINGS
WITH OUR
1961 SUMMER SALE
MONROE
FOLDING
BANQUET TABLES
Monroe
CATALOG
in COLORS
40 PAGES • COLOR
PICTURES • PRICES
DISCOUNTS
FREE—1961 CATALOG AND SUMMER SALE PRICES
ATTENTION — Churches, Schools, Clubs, Lodges and all organizations. MONROE Folding Banquet Tables at direct-from-factory summer sale prices, terms, etc. MONROE Folding Tables are unmatched for quality and durability. New pedestal and frame construction. Automatic locking pedestal legs. 68 models and sizes. WRITE TODAY FOR OUR NEW 1961 CATALOG — full color, featuring MONROE Folding Tables, Folding Chairs, Table and Chair Trucks, Portable Partitions, Folding Risers & Platforms. Our 53rd year!
THE MONROE COMPANY
6 Church St.
COLFAX, IOWA

with the same enthusiasm as this avid reader PREMIER continually undertakes to give their best effort to every **photo engraving** with sensitivity and skill.

PREMIER ENGRAVING COMPANY
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READER'S SERVICE SECTION

INDEX TO SCHOOL EQUIPMENT

The index and digest of advertisements below will help you obtain free information, catalogs, and product literature from the advertisements and companies listed in the new products section. Merely encircle the code number assigned to each firm in the request form below, clip the form and mail it to THE AMERICAN SCHOOL BOARD JOURNAL. Your request will receive prompt attention.

Code No.		Page No.
60	**Acme Chemical Company**..... Maintenance supplies	43
61	**American Playground Device Company** ..... Playground & swimming pool equipment	46
62	**DuKane Corporation** ..... School sound systems	2
63	**Firestone Tire & Rubber Co.** ..... Tires	2nd cover
64	**Hillyard Chemical Company**.... Maintenance supplies	41
65	**Johnson Service Company**..... Pneumatic controls	1
66	**Kewaunee Mfg. Company** ..... Laboratory furniture	3rd cover
67	**Kewaunee Technical Furniture Company** . Laboratory furniture	3rd cover
68	**Krueger Metal Products Co.**..... Portable seating	4
69	**Library Binding Institute**..... Binding advisors	46
610	**Minneapolis-Honeywell Regulator Company** ..... Maintenance agreement	5
611	**Minneapolis-Honeywell Regulator Company** .....4th cover Thermostatic control	
612	**Monroe Co., The**..... Summer sale	48
613	**Nissen-Medart Corp.** ..... Gym apparatus	7
614	**Porter Athletic Equipment, Div. Waco-Porter Corp.**..... Extended basketball backstop	42
615	**Premier Engraving Company**.... Engravers	48

USE THESE CARDS

These cards are provided for the convenience of THE AMERICAN SCHOOL BOARD JOURNAL readers in requesting information on products, services, booklets, and catalogs offered by the advertisers in this issue.

June, 1961

THE AMERICAN SCHOOL BOARD JOURNAL
400 North Broadway, Milwaukee 1, Wisconsin

Please ask the manufacturers, whose code numbers I have encircled, to send me the information, catalogs, or product literature offered in this issue.

ADVERTISING INDEX

60 62 64 66 68 610 612 613 614 615 616 617 618 619 620 621
61 63 65 67 69 611

NEW PRODUCTS — CATALOGS AND BOOKLETS

091 093 095 097 099 0101 0103 0104 0105 0106 0107 0108 0109 0110 0111 0112
092 094 096 098 0100 0102

Name _____

Title _____ School _____

City _____ Zone ____ State _____

HAVE YOU SIGNED YOUR NAME AND ADDRESS?

June, 1961

THE AMERICAN SCHOOL BOARD JOURNAL
400 North Broadway, Milwaukee 1, Wisconsin

Please ask the manufacturers, whose code numbers I have encircled, to send me the information, catalogs, or product literature offered in this issue.

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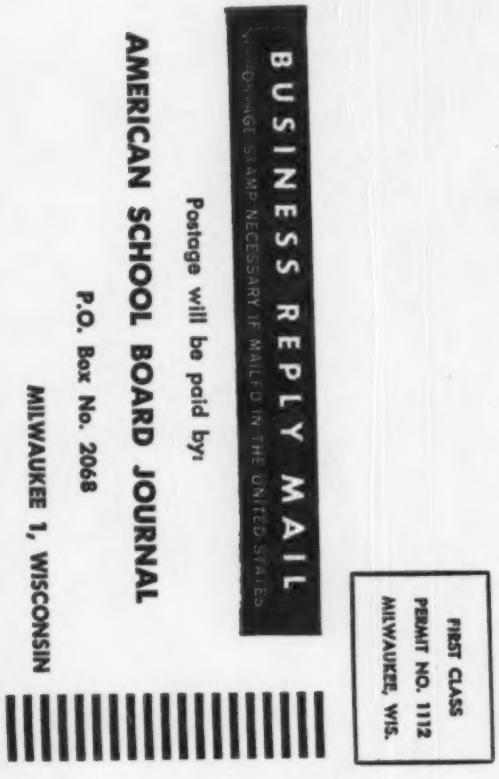
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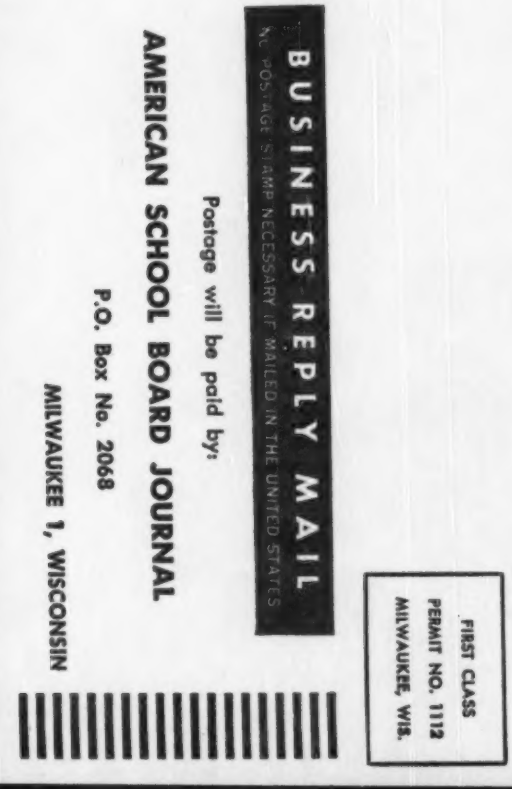
MILWAUKEE 1, WISCONSIN
FIRST CLASS
PERMIT NO. 1112
MILWAUKEE, WIS.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READER'S SERVICE SECTION

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095	**Vogel-Peterson Co.** ..... Self-Loading Truck	44
096	**Cincinnati Time Recorder Co.** .... Tower Clocks	44
097	**Chicago Hardware Foundry Co.** .. Sani-Dri Dryers	44
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CATALOGS AND BOOKLETS

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superior Kewaunee quality proved by infallible

"INSIDE OUT TEST"

Any resemblance between these characters and people, living or dead, is purely coincidental. "Two Ton Tony" and "Teenie" are merely demonstrating that Kewaunee Laboratory Furniture can really take it!

Although it's unlikely that any furniture will have to withstand abuse like this, it has always been Kewaunee's policy to design and build-in strength that is far beyond normal requirements. No matter how you look at it . . . inside or out . . . you'll immediately detect the many advantages of Kewaunee furniture.

Rest assured that Kewaunee's high productivity, with modern streamlined manufacturing methods, produces the finest furniture on the market today. Ask to see the representative in your vicinity or send for the latest catalog.

*Look for these exclusive Kewaunee features . . . unmistakable symbols of quality.

This KTF-710 Storage Case is a true version of the masterpiece being dismantled above.

ASK ABOUT "30 DAY" KEMTECH STOCK ITEMS

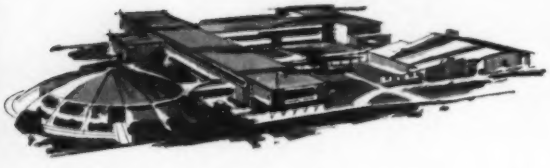
K

KEWAUNEE MANUFACTURING COMPANY
ADRIAN, MICHIGAN
KEWAUNEE TECHNICAL FURNITURE CO.
STATESVILLE, N. C.

General Sales Office
Kewaunee Technical Furniture Co.
3001 W. Front St., Statesville, N. C

(For more information from advertisers, use postcard on page 49)

Dr. John C. Albohm, Superintendent of Schools, York, Pennsylvania, says:



"Honeywell thermostats on the wall assure our students an ideal climate for learning"

A thermostat in every classroom of award-winning Hannah Penn Junior High School, controls room temperatures to fit the activity. Result: better teaching, better learning.

"Students are more alert and respond quicker when classroom temperatures are accurately controlled," says Dr. Albohm. "With a Honeywell thermostat on the wall of every classroom, we're assured of precise, responsive temperature control regardless of the activity or size of the class. What's more, our students work in a happier, healthier environment—this means fewer absences, greater in-school efficiency."

In schools, the wall is always the best place for the thermostat. On the wall, it feels classroom temperature the way students do. It is also more convenient to read and adjust. And it helps keep fuel bills at a minimum by preventing wasteful overheating.

You can also depend on Honeywell to recommend the best temperature control system for your school because only Honeywell makes all three types of control systems—pneumatic, electric and electronic. For further information, call your local Honeywell office. Or write Honeywell, Dept. AJ-6-60, Minneapolis 8, Minnesota. Sales and service offices in all principal cities of the world.

HANNAH PENN JUNIOR HIGH SCHOOL,
YORK, PENNSYLVANIA
Architect and Engineers: Buchart & Associates
General Contractors: Reindollar & Son
Heating Contractors: Yorkaire Heating and Cooling Company

Honeywell

H HONEYWELL *First in Control* SINCE 1885